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Hon. EDWARD W. QUINN

MAYOR

City of Cambridge

Massachusetts

THE ANNUAL REPORTS

Made to the City Council

FOR THE

Year Ending March 31, 1920

352
C14



PUBLISHED BY ORDER OF THE CITY COUNCIL
UNDER THE DIRECTION OF THE
CITY CLERK

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INAUGURAL ADDRESS
OF
Hon. EDWARD W. QUINN
JANUARY 1, 1920

Gentlemen of the City Council:

Conforming to the law as laid down in our city charter, we meet here today to qualify for public duty and at the same time to outline our civic policy for the current year. When I took office two years ago the nation was at war. The interval has brought us peace, a peace won largely as the result of the valor of our American youth in arms, and the patriotic co-operation of the American people in supplying the necessary adjuncts of war. As a natural sequence of these events the problem that faces us today is reconstruction. There are a number of projects that come under this heading, some of which I will dwell upon here, while others will be taken up at later intervals.

FINANCE

Through a peculiar situation in respect to our city charter there is a difference of three months between the beginning of our municipal year on the first Monday in January and of our fiscal year which begins April 1st. Immediately upon its organization the City Council, with the Mayor, can authorize money necessary for permanent improvements, by the issue of city bonds. With a borrowing capacity of practically $650,000 we are in a good position to proceed with our program of reconstruction and improvement without hesitation. In the past very serious delays have resulted from failure to take advantage of the opportunity presented by the law which sets January 1st as the date upon which the borrowing capacity of a city is fixed. I intend to transmit to the City Council at once my program for loan issues. The need for permanent improvement in many of our city activities is pressing. With the co-operation of the City Council this program can be made immediately effective so that construction work can start at the earliest possible moment. As a result of tremendous difficulties and sharply rising costs, the salaries of our city employees

have in many instances been raised within the past six months. As a matter of justice to all it seems urgent to extend these increases to our city laborers and such subordinates in the various departments as have not yet received equitable consideration.

SCHOOLS

The education of our youth is one of the deepest obligations of government. Cambridge has ever met this duty creditably. Not only is it needful to have a high grade teaching staff, but it is equally urgent to have adequate housing facilities. The rapid growth of technical education, to meet the world-need of the hour, is shown emphatically in the additional registration at the Rindge Technical School. To meet this congested condition, an extension to the present structure must be provided at once.

The rapid growth of child population in Ward 7 renders necessary a readjustment of the school facilities in that district. A new building should be erected to fit into the urgent demands of education and comfort in this situation.

FILTRATION

I wish to repeat my recommendation of two years ago, regarding the water system; namely, the construction of a filtration plant and the repair of the Payson Park reservoir. This accomplishment has been deferred on account of the war, and should not be delayed any longer. The funds to carry on this work are available, owing to the sound condition of the finances of our Water Department.

STREET DEPARTMENT

During the past year there has been expended the largest sum ever appropriated for permanent construction on our main thoroughfares, hence the opportunity is at hand to turn our attention to street construction in the residential and industrial sections adjoining these highways.

As part of this program new bridges should be built over the broad canal to meet the changed needs of traffic in that section. The First Street bridge in my opinion requires immediate attention, and I shall recommend the erection of a concrete structure with a rolling lift draw at this point.

DUMPING

The absence of dumping facilities adjacent to our main industrial district is a grave problem calling for immediate solution. The clay pits in North Cambridge, having served their purpose of commercial utility, provide ample means for the need of the hour. This plan will serve the double purpose of meeting the requirements of manufacturers and householders, and at the same time reclaiming these waste areas for commercial use. With this in mind I recommend the purchase by the city of certain of the present chain of clay pits in North Cambridge.

CEMETERY DEPARTMENT

For the first time in our history the Cambridge Cemetery Department is self-sustaining. This was brought about by making available much territory which needed filling because it was below the proper level for burial purposes. There is still land susceptible to similar treatment and I shall recommend an appropriation for this purpose.

FIRE DEPARTMENT

The program of completing the motorization of the Fire Department has progressed more in the past two years than ever before. I hope to finish this work during the next two years, making the department as perfect in this respect as it is in others.

BUSINESS DEVELOPMENT

Two years ago I recommended the appointment of an unpaid board, to be known as the Homestead and Industrial Commission. My purpose was to stimulate a program of development covering both residential and industrial sections of the city. The advent of the war precluded any activity along this line, but the need of such work is greater now than it was at that time. It is a wise policy for Cambridge to capitalize the many advantages of her situation in the heart of the metropolitan district. Our transportation facilities, our educational advantages, and the high moral tone of our community life, all tend to make Cambridge an ideal residential city. While the tracts of vacant land for residential purposes are limited, there are sections of our city which were built up many years ago, largely with single

houses fast declining in usefulness. These houses occupy for the most part large land areas, which could be utilized to a much greater taxable advantage for apartment house construction.

It would be impossible to over-estimate the value of a vigorously conducted factory development policy for Cambridge. The revenue derived from real estate values would be greatly added to by the personal property which factories would bring, and the increased prosperity that would ensue from the large pay-roll expenditure of money. The loft factory system which has already been initiated in East Cambridge can and should be greatly added to by similar development in other places.

Under the direction of a competent commission such as is my intention to create forthwith, the important question of spur track facilities—a matter so vital to a successful industrial development, will assuredly receive an intelligent settlement.

A MEMORIAL BUILDING

It is both fitting and proper that Cambridge, with her traditions, should commemorate in a becoming manner the part that her sons, both living dead, played in the late war. To my mind, a Memorial Building, erected in a conveniently central part of the city, could be utilized as a civic centre as well as a monument to those who died that democracy might live. The building should be not only impressive in architecture, but so constructed as to cover a variety of uses. It would be advisable to include a large public auditorium, gymnasium with swimming pool, a branch of the Public Library, separate quarters for the different war veterans, recreation rooms and other facilities aimed to promote comfort and education along lines both social and civic.

The site to be selected should be such as to permit of an artistic treatment in keeping with the dignity of a monument dedicated to so high a purpose.

In order to avoid conflict with other phases of city development, I propose to petition the Legislature for authority to borrow outside the debt limit a sum sufficient to carry this laudable project to full completion.

Gentlemen of the City Council, let me remind you in conclusion that we are the chosen servants of the citizens of Cambridge, charged

with the grave responsibility of administering their affairs. Success worth while in public life is based upon a clear understanding of this relation between the people and their chosen representatives. God grant that we shall so conduct ourselves as to deserve the plaudits we all like to receive as a reward of our stewardship.

REPORT OF CITY TREASURER

LETTER OF TRANSMITTAL

City of Cambridge, Mass.

Office of the City Treasurer, April 1, 1920.

To the Honorable, the City Council:

In compliance with the provisions of Chapter 56 of the revised ordinances of 1892, amended to Nov. 8, 1899, compiled to Nov. 10, 1913, concerning "Annual reports of officers and Boards in charge of Departments," I respectfully submit herewith a detailed report of the receipts and expenditures of the public funds by the Treasury Department during the year ending March 31, 1920, including an account of all bonded and temporary loans negotiated in said year, also a detailed account of official fees received and reports of all trust funds in the care of the City Treasurer. In addition to the above, a report of the Commissioners of the Sinking Funds of the City, together with a report of the Committee of Finance, is included.

Very respectfully,

HENRY F. LEHAN,

City Treasurer.

TRIAL BALANCE TREASURER'S LEDGER, APRIL 1, 1920

	Dr.	Cr.
Cash	$248,870 84	
Harvard Trust Company Tailings	4,890 22	
Taxes 1913	334 60	
" 1914	506 62	
" 1915	800 80	
" 1916	33,357 05	
" 1917	39,185 96	
" 1918	217,565 50	
" 1919	691,873 52	
Street Sprinkling 1915	16 84	
" " 1916	69 67	
" " 1917	188 72	
Moth 1915	7 91	
" 1916	6 08	
" 1917	12 48	
" 1918	41 72	
" 1919	180 37	
Unapportioned Sewers	673 16	
Committed Sewer Interest	170 70	
Apportioned Sewers 1919	622 08	
Unapportioned Sidewalk	6,352 11	
Apportioned Sidewalks 1915	16 33	
Committed Sidewalk Interest	17 13	
Apportioned Sidewalks 1916	23 92	
" " 1918	6 70	
" " 1919	68 24	
Tax Liens	12,606 97	
Tax and Assessment Variations	225 94	
City Messenger	114 31	
Health	30,119 28	
Sewer Maintenance	313 05	
Streets	3,874 35	
Outside Aid	43,183 52	
Municipal Hospital	14,442 62	
State Aid	2,762 14	
Schools	2,304 88	
Federal Fund (Smith Hughes)		$275 96
Parks	527 87	
Cemeteries	5,438 60	
Meter Water Charges	20,120 01	
Annual Water Charges	11,293 70	
Miscellaneous Charges	5,703 87	
Construction	9 53	
Revenue Loans		700,000 00
Tailings		4,890 22
Premiums on Loans		17,654 62
Purchase of Land, Cedar Street	223 00	
Sale of Land, Blackstone Street		25,400 00
Abatements prior to 1916 Levy	131,994 09	
Overlay 1916	52 45	
" 1917	235 25	
" 1918		15,791 03
" 1919	10,506 49	
Amount brought forward	$1,541,848 19	$764,011 83

Amount carried forward	$1,541,848 19	$764,011 83
Sewer Assessment Revenue		1,402 94
Edgestones and Sidewalk Assm't		6,484 43
Departmental Revenue		103,604 41
Water Construction Bills		9 53
Water—Cash Surplus		210,598 88
Water Revenue		37,117 58
Loans Authorized	223,737 33	
Excess and Deficiency		275,848 42
Five Year Street Loan Balance		12,471 47
Non-Revenue Appropriations		354,036 03
Total	$1,765,585 52	$1,765,585 52

TEMPORARY LOANS IN ANTICIPATION OF REVENUE NEGOTIATED DURING THE YEAR ENDING MARCH 31, 1920

Date	Maturity	Amount	Discount per annum
April 25, 1919.....	Dec. 24, 1919.....	$300,000.00	4.41 plus $6.00
June 26, 1919.....	Jan. 26, 1920.....	200,000.00	4.23 " 1.75
July 17, 1919.....	Feb. 17, 1920.....	200,000.00	4.28 " 5.00
Aug. 13, 1919.....	March 1, 1920.....	200,000.00	4.47 " 3.25
Sept. 5, 1919.....	Nov. 5, 1919.....	300,000.00	4.46 " 5.00
Sept. 25, 1919.....	Jan. 15, 1920.....	100,000.00	4.25 " 2.00
Feb. 11, 1920.....	Nov. 9, 1920.....	200,000.00	5.83
Feb. 13, 1920.....	Oct. 16, 1920.....	300,000.00	5.83
March 11, 1920.....	Jan. 3, 1921.....	200,000.00	5.75
Total.....		$2,000,000.00	

DEPENDENT AID NOTES—ACTS 1918—CHAPTER 108

Date	Maturity	Amount	Discount per annum
January 27, 1920.....	November 3, 1920.....	$70,000.00	$5.35

PARTICULARS CONCERNING BONDS NEGOTIATED DURING THE YEAR ENDING MARCH 31, 1920

Date of Bonds	Amount	Loan	Years to Run	Rate	Purchaser	Rate
July 1, 1917	$ 5,000.00	Street Construction.....	$1,000 annually for 5 years	4%	Kidder, Peabody & Co.	101.335
Oct. 1, 1919	2,500.00	Street Construction.....	500 annually for 5 years	4½%	"	101.335
Oct. 1, 1919	10,000.00	Street Construction.....	2,000 annually for 5 years	4½%	"	101.335
Oct. 1, 1919	50,000.00	Street Construction.....	10,000 annually for 5 years	4½%	"	101.335
Oct. 1, 1919	6,250.00	Street Construction.....	2,250 annually for 1 year 1,000 annually for 4 years	4½%	"	101.335
Oct. 1, 1919	10,000.00	Street Construction.....	1,000 annually for 10 years	4½%	"	101.335
Oct. 1, 1919	25,000.00	Street Construction.....	2,500 annually for 10 years	4½%	"	101.335
Oct. 1, 1919	180,000.00	Street Construction.....	20,000 annually for 8 years 10,000 annually for 2 years	4½%	"	101.335
Oct. 1, 1919	7,500.00	Sewer Construction.....	500 annually for 15 years	4½%	"	101.335
Oct. 1, 1919	15,000.00	School House.....	1,000 annually for 15 years	4½%	"	101.335
Oct. 1, 1919	150,000.00	Hospital.....	8,000 annually for 18 years 3,000 annually for 2 years	4½%	"	101.335
Oct. 1, 1919	45,000.00	Sewer Construction.....	15,000 annually for 30 years	4½%	"	101.335
Total.....	$506,250.00					

RECAPITULATION

Street	$288,750 00
Sewer	52,500 00
School	15,000 00
Hospital	150,000 00
	$506,250 00

FEES

During the year ending March 31, 1920, the Treasurer has received official fees amounting to $5,075.89, itemized as follows:

Tax Sale:	
Preparation	$121 00
Advertising	271 74
Deeds	277 00
Posting	120 00
Recording	52 65
Certificates of liens	558 00
Affidavits	65 00
Examination of Title	35 00
Statutory Fee	13 00
Demand	35 50
Taxes-Summonses	1,964 00
Releases	63 00
Services of department in collection of water, taxes, etc.	$1,500 00
Total	$5,075 89

These fees were turned into the City Treasury as received.

REPORT OF TRUST FUNDS IN HANDS OF CITY TREASURER

REPORT OF THE CEMETERY TRUST FUND

Cash Account

Dr.

Cash on Hand, March 31, 1919	$715 94	
Received from Proprietors of Lots for Perpetual Care	3,090 25	
Received for Bonds Matured to March 31, 1920	6,300 00	
Received for Bonds Sold	106,557 01	
Received for Interest on Investments	6,543 90	
		$123,207 10

Cr.

Paid to Cemetery Trustees for Care of Lots in Perpetual Care	$6,543 90	
Paid for Bonds Purchased	115,584 58	
Balance in Hand, March 31, 1920	1,078 62	
		123,207 10

Bond Account

Amount of Bonds in Funds March 31, 1920.....		126,050 00
Amount of Bonds Purchased		121,000 00
		$247,050 00
Amount of Bonds Sold	$114,000 00	
Amount of Bonds matured to March 31, 1920....	6,300 00	
		120,300 00
		$126,750 00
The Funds Are:		
Fund for Perpetual Care	$127,396 62	
Fund for Deeds in Trust.....	432 00	
		$127,828 62
The Assets of the Funds Are:		
Registered Bonds of the City of Cambridge	$7,750 00	
Registered Liberty Bonds of the United States	111,000 00	
Coupon Bonds of the United States to be Registered	8,000 00	
Cash in Harvard Trust Company	1,078 62	
		$127,828 62

List of Bonds Belonging to the Cemetery Trust Fund

City of Cambridge Registered.....	4½	July	1, 1920	500 00
" " " "	3½	March	1, 1921	800 00
" " " "	4½	March	1, 1921	2,000 00
" " " "	4	July	1, 1921	800 00
" " " "	4½	July	1, 1921	500 00
" " " "	4½	March	1, 1922	2,000 00
" " " "	3½	May	1, 1925	950 00
" " " "	3½	Sept.	1, 1932	200 00
U. S. 3rd Liberty Loan Registered	4¼	Sept.	15, 1928	111,000 00
U. S. 4th Liberty Loan Coupon	4¼	Oct.	15, 1938	8,000 00
				$126,750 00

Bridge Charitable Fund

Amount of Fund March 31, 1919		$2,758 69
Interest to March 31, 1920	$111 42	
Two-thirds to Overseers of Poor	74 28	
One-third to Principal of Fund		37 14
Total of Fund March 31, 1920		$2,795 83

Sarah E. Russell Fund

The amount of the bequest was $814.41, and was deposited in the Cambridgeport Savings Bank, where it now remains.

The interest accumulations, amounting to $37.04 for the year, have been paid to John T. Shea, Superintendent of the City Home, and were used as Stipulated in the will of Mrs. Russell.

Report of the Wm. Penn Harding Fund

March 31, 1919, deposited in East Cambridge Savings Bank	$1,000 00
The interest on said fund, amounting to $45.50, was paid to the Trustees of the Public Library in accordance with the provisions of the gift.	
The pass book of the East Cambridge Savings Bank shows that on March 31, 1920, the amount on deposit was.....	$1,000 00

John Wesley Freese Fund

March 31, 1919, Cash on Hand	$105 11
Interest on Deposit	4 77
Balance in Cambridgeport Savings Bank, March 31, 1920	$109 88

Tailings Account

The amount of the fund March 31, 1919 was	$4,775 84
Interest on deposit to March 31, 1920	114 38
March 31, 1920, Balance on Deposit at Harvard Trust Company	$4,890 22

Hopkins Fund

Dr.

March 31, 1919, Balance	$946 85	
Received from Treasurer of Hopkins Fund	825 77	
Received Interest on Deposits	34 11	
		$1,806 73

Cr.

Paid City of Cambridge for Tuition	$160 00	
" Rosamond Coolidge Prize	120 00	
" Allen Read Freeman	105 00	
" Carolyn Stubbs	15 00	
" Anna Dallinger	5 00	
" Harriet Lane	5 00	
" For Supplies	183 25	
Balance on Deposit at Harvard Trust Co., March 31, 1920	1,213 48	
		$1,806 73

City Auditor's statement of provisions of Section 1, Chapter 322, Acts of 1904.

Under the provisions of Section 1, Chapter 322, Acts of 1904, I hereby certify that I have this day examined the accounts, vouchers and securities belonging to the within Trust Funds held for public use and find them to be correct and in excellent condition.

Attest:

CHARLES H. THURSTON,

City Auditor.

The bonded City Debt matures as follows:—

Issued serially, provided for in the annual tax levy.

Apr.	1, 1920,	Sewer Construction .	4½s	500 00
May	1, 1920,	Street . . .	4s	1,500 00
May	1, 1920,	Sewer Sep. System .	4s	1,000 00
May	1, 1920,	Sewer . . .	3½s	500 00
May	1, 1920,	Street . . .	4s	1,500 00
May	1, 1920,	Cambridge Bridge .	4s	2,000 00
June	1, 1920,	Street . . .	4s	1,400 00
July	1, 1920,	Street . . .	4s	300 00
July	1, 1920,	Street . . .	4s	7,500 00
July	1, 1920,	Street . . .	4s	1,000 00
July	1, 1920,	Street . . .	4s	3,500 00
July	1, 1920,	Street . . .	3½s	2,500 00
July	1, 1920,	Street . . .	4s	2,500 00
July	1, 1920,	Building . . .	4s	4,000 00
July	1, 1920,	Sewer . . .	4s	500 00
July	1, 1920,	Sewer Sep. System .	4s	500 00
July	1, 1920,	Playground . .	4s	1,500 00
July	1, 1920,	Park . . .	4s	1,000 00
July	1, 1920,	School House . .	4½s	3,250 00
July	1, 1920,	Building . . .	4½s	5,500 00
July	1, 1920,	Street . . .	4½s	9,300 00
July	1, 1920,	Street . . .	4s	4,800 00
July	1, 1920,	Street . . .	4s	3,500 00
July	1, 1920,	Bridge . . .	4s	400 00
July	1, 1920,	Sewer Sep. System .	4s	1,000 00
July	1, 1920,	Park . . .	4s	1,000 00
July	1, 1920,	Street . . .	4s	500 00
July	1, 1920,	School House . .	4½s	5,000 00
July	1, 1920,	Building . . .	4½s	4,000 00
July	1, 1920,	Sewer . . .	4½s	1,500 00
July	1, 1920,	Street . . .	4½s	3,500 00
July	1, 1920,	Street . . .	4½s	2,000 00
July	1, 1920,	Street . . .	4½s	5,300 00
July	1, 1920,	Street . . .	4s	1,000 00
Aug.	1, 1920,	Street . . .	4s	1,000 00
Aug.	1, 1920,	Street . . .	4s	12,000 00
Sept.	1, 1920,	Street . . .	4s	6,000 00
Sept.	1, 1920,	Park . . .	3½s	2,000 00
Sept.	1, 1920,	Street . . .	4½s	800 00
Sept.	1, 1920,	Hospital . . .	4½s	3,000 00
Sept.	1, 1920,	Building . . .	4½s	1,000 00
Sept.	1, 1920,	Street . . .	4½s	9,000 00
Oct.	1, 1920,	Street . . .	4s	2,750 00
Oct.	1, 1920,	Street . . .	3½s	6,350 00
Oct.	1, 1920,	Street . . .	4s	3,900 00
Oct.	1, 1920,	Street . . .	4½s	500 00
Oct.	1, 1920,	Street . . .	4½s	2,000 00
Oct.	1, 1920,	Street . . .	4½s	10,000 00
Oct.	1, 1920,	Street . . .	4½s	2,250 00
Oct.	1, 1920,	Street . . .	4½s	10,000 00
Oct.	1, 1920,	Street . . .	4½s	2,500 00
Oct.	1, 1920,	Street . . .	4½s	20,000 00
Oct.	1, 1920,	Sewer Cons't . .	4½s	500 00

Amount carried forward $180,300 00

Amount brought forward				$180,300 00
Oct.	1, 1920,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1920,	School House	4½s	1,000 00
Oct.	1, 1920,	Hospital	4½s	8,000 00
Nov.	1, 1920,	Street	4s	1,000 00
Nov.	1, 1920,	Sewer	3½s	500 00
Nov.	1, 1920,	Street	4s	5,500 00
Nov.	1, 1920,	Park	4s	1,000 00
Dec.	1, 1920,	Street	4s	700 00
Dec.	1, 1920,	Municipal	4s	1,000 00
Dec.	1, 1920,	Street	4s	400 00
Dec.	1, 1920,	Sewer Sep. System	4s	500 00
Dec.	1, 1920,	Dept. Equipment	4½s	7,000 00
Dec.	1, 1920,	Street Cons't	4½s	20,000 00
Dec.	1, 1920,	Street Cons't	4½s	3,250 00
Dec.	1, 1920,	Building	4½s	3,000 00
Dec.	1, 1920,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1920,	Sewer Cons't	4½s	500 00
Dec.	1, 1920,	Playground	4s	300.00
Jan.	1, 1921,	Sewer	4s	500 00
Jan.	1, 1921,	School House	4s	3,250 00
Feb.	1, 1921,	Street	4s	600 00
Feb.	1, 1921,	Building (School House)	4s	500 00
Mar.	1, 1921,	Hospital	4s	4,500 00
Mar.	1, 1921,	Building (Hospital)	4s	2,000 00
Mar.	1, 1921,	Street	4s	3,000 00
Apr.	1, 1921,	Sewer Construction	4½s	500 00
May	1, 1921,	Street	4s	1,500 00
May	1, 1921,	Sewer Sep. System	4s	1,000 00
May	1, 1921,	Sewer	3½s	500 00
May	1, 1921,	Cambridge Bridge	4s	2,000 00
June	1, 1921,	Street	4s	1,400 00
July	1, 1921,	Street	4s	300 00
July	1, 1921,	Street	4s	7,500 00
July	1, 1921,	Street	4s	1,000 00
July	1, 1921,	Street	4s	3,500 00
July	1, 1921,	Street	3½s	2,500 00
July	1, 1921,	Street	4s	2,000 00
July	1, 1921,	Building	4s	4,000 00
July	1, 1921,	Sewer Sep. System	4s	500 00
July	1, 1921,	Sewer	4s	500 00
July	1, 1921,	Playground	4s	1,500 00
July	1, 1921,	Park	4s	1,000 00
July	1, 1921,	School House	4½s	3,250 00
July	1, 1921,	Building	4½s	5,500 00
July	1, 1921,	Street	4½s	9,300 00
July	1, 1921,	Street	4s	4,800 00
July	1, 1921,	Street	4s	3,500 00
July	1, 1921,	Bridge	4s	400 00
July	1, 1921,	Sewer Sep. System	4s	1,000 00
July	1, 1921,	Park	4s	1,000 00
July	1, 1921,	Street	4s	500 00
July	1, 1921,	School House	4½s	5,000 00
July	1, 1921,	Building	4½s	4,000 00
July	1, 1921,	Sewer	4½s	1,500 00
July	1, 1921,	Street	4½s	3,500 00
Amount carried forward				$325,250 00

Amount brought forward				$325,250 00
July	1, 1921,	Street	4½s	2,000 00
July	1, 1921,	Street	4½s	5,300 00
July	1, 1921,	Street	4s	1,000 00
Aug.	1, 1921,	Street	4s	1,000 00
Aug.	1, 1921,	Street	4s	12,000 00
Sept.	1, 1921,	Street	4s	6,000 00
Sept.	1, 1921,	Park	3½s	2,000 00
Sept.	1, 1921,	Street	4½s	800 00
Sept.	1, 1921,	Hospital	4½s	3,000 00
Sept.	1, 1921,	Building	4½s	1,000 00
Sept.	1, 1921,	Street	4½s	7,000 00
Sept.	1, 1921,	Street	4½s	9,000 00
Oct.	1, 1921,	Street	4s	2,750 00
Oct.	1, 1921,	Street	3½s	6,350 00
Oct.	1, 1921,	Street	4s	500 00
Oct.	1, 1921,	Street	4½s	500 00
Oct.	1, 1921,	Street	4½s	2,000 00
Oct.	1, 1921,	Street	4½s	10,000 00
Oct.	1, 1921,	Street	4½s	1,000 00
Oct.	1, 1921,	Street	4½s	10,000 00
Oct.	1, 1921,	Street	4½s	2,500 00
Oct.	1, 1921,	Street	4½s	20,000 00
Oct.	1, 1921,	Sewer Cons't	4½s	500 00
Oct.	1, 1921,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1921,	School House	4½s	1,000 00
Oct.	1, 1921,	Hospital	4½s	8,000 00
Nov.	1, 1921,	Street	4s	1,000 00
Nov.	1, 1921,	Sewer	3½s	500 00
Nov.	1, 1921,	Street	4s	5,000 00
Dec.	1, 1921,	Street	4s	700 00
Dec.	1, 1921,	Municipal	4s	1,000 00
Dec.	1, 1921,	Street	4s	400 00
Dec.	1, 1921,	Sewer Sep. System	4s	500 00
Dec.	1, 1921,	Dept. Equipment	4½s	7,000 00
Dec.	1, 1921,	Street Cons't	4½s	20,000 00
Dec.	1, 1921,	Street Cons't	4½s	3,250 00
Dec.	1, 1921,	Building	4½s	3,000 00
Dec.	1, 1921,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1921,	Sewer Cons't	4½s	500 00
Dec.	1, 1921	Playground	4s	300 00
Jan.	1, 1922,	Sewer	4s	500 00
Jan.	1, 1922,	School House	4s	3,250 00
Feb.	1, 1922,	Street	4s	600 00
Feb.	1, 1922,	Building (School House)	4s	500 00
Mar.	1, 1922,	Hospital	4s	4,500 00
Mar.	1, 1922,	Building (Hospital)	4s	2,000 00
Mar.	1, 1922,	Sewer	4s	500 00
Apr.	1, 1922,	Sewer Construction	4½s	500 00
May	1, 1922,	Street	4s	1,500 00
May	1, 1922,	Sewer Sep. System	4s	1,000 00
May	1, 1922,	Sewer	3½s	500 00
May	1, 1922,	Cambridge Bridge	4s	2,000 00
July	1, 1922,	Street	4s	1,000 00
July	1, 1922,	Street	4s	3,500 00
July	1, 1922,	Street	3½s	2,500 00
Amount carried forward				$510,450 00

Amount brought forward					$510,450 00
July	1, 1922,	Street	4s	2,000 00	
July	1, 1922,	Building	4s	4,000 00	
July	1, 1922,	Sewer	4s	500 00	
July	1, 1922,	Sewer Sep. System	4s	500 00	
July	1, 1922,	Playground	4s	1,500 00	
July	1, 1922,	Park	4s	1,000 00	
July	1, 1922,	School House	4½s	3,250 00	
July	1, 1922,	Building	4½s	5,500 00	
July	1, 1922,	Street	4½s	9,300 00	
July	1, 1922,	Street	4s	4,800 00	
July	1, 1922,	Street	4s	3,500 00	
July	1, 1922,	Bridge	4s	400 00	
July	1, 1922,	Sewer Sep. System	4s	1,000 00	
July	1, 1922,	Park	4s	1,000 00	
July	1, 1922,	Street	4s	500 00	
July	1, 1922,	Street	4½s	2,000 00	
July	1, 1922,	Street	4s	1,000 00	
Aug.	1, 1922,	Street	4s	12,000 00	
Aug.	1, 1922,	Street	4s	1,000 00	
Sept.	1, 1922,	Street	4s	6,000 00	
Sept.	1, 1922,	Street	4½s	800 00	
Sept.	1, 1922,	Hospital	4½s	3,000 00	
Sept.	1, 1922,	Park	3½s	2,000 00	
Sept.	1, 1922,	Building	4½s	1,000 00	
Sept.	1, 1922,	Street	4½s	7,000 00	
Oct.	1, 1922,	Street	4s	2,750 00	
Oct.	1, 1922,	Street	3½s	6,350 00	
Oct.	1, 1922,	Street	4s	500 00	
Oct.	1, 1922,	Street	4½s	500 00	
Oct.	1, 1922,	Street	4½s	2,000 00	
Oct.	1, 1922,	Street	4½s	10,000 00	
Oct.	1, 1922,	Street	4½s	1,000 00	
Oct.	1, 1922,	Street	4½s	10,000 00	
Oct.	1, 1922,	Street	4½s	2,500 00	
Oct.	1, 1922,	Street	4½s	20,000 00	
Oct.	1, 1922,	Sewer Cons't	4½s	500 00	
Oct.	1, 1922,	Sewer Cons't	4½s	1,500 00	
Oct.	1, 1922,	School House	4½s	1,000 00	
Oct.	1, 1922,	Hospital	4½s	8,000 00	
Nov.	1, 1922,	Street	4s	5,000 00	
Nov.	1, 1922,	Sewer	3½s	500 00	
Dec.	1, 1922,	Street	4s	700 00	
Dec.	1, 1922,	Municipal	4s	1,000 00	
Dec.	1, 1922,	Street	4s	400 00	
Dec.	1, 1922,	Sewer Sep. System	4s	500 00	
Dec.	1, 1922,	Dept. Equipment	4½s	7,000 00	
Dec.	1, 1922,	Street Cons't	4½s	20,000 00	
Dec.	1, 1922,	Street Cons't	4½s	3,250 00	
Dec.	1, 1922,	Building	4½s	3,000 00	
Dec.	1, 1922,	Sewer Cons't	4½s	1,000 00	
Dec.	1, 1922,	Sewer Cons't	4½s	500 00	
Dec.	1, 1922,	Playground	4s	300 00	
Jan.	1, 1923,	Sewer	4s	500 00	
Jan.	1, 1923,	School House	4s	3,250 00	
Feb.	1, 1923,	Street	4s	600 00	
Amount carried forward					$699,100 00

Amount brought forward					$699,100 00
Feb.	1, 1923,	Building (School House)	4s	500 00	
Mar.	1, 1923,	Hospital . . .	4s	4,500 00	
Mar.	1, 1923,	Building (Hospital) .	4s	2,000 00	
Mar.	1, 1923,	Sewer . . .	4s	500 00	
Apr.	1, 1923,	Sewer Construction .	4½s	500 00	
May	1, 1923,	Sewer Sep. System .	4s	1,000 00	
May	1, 1923,	Sewer . . .	3½s	500 00	
May	1, 1923,	Cambridge Bridge .	4s	2,000 00	
July	1, 1923,	Sewer . . .	4s	500 00	
July	1, 1923,	Street . . .	4s	3,500 00	
July	1, 1923,	Street . . .	3½s	2,500 00	
July	1, 1923,	Street . . .	4s	2,000 00	
July	1, 1923,	Building . . .	4s	4,000 00	
July	1, 1923,	Sewer Sep. System .	4s	500 00	
July	1, 1923,	Playground . .	4s	1,500 00	
July	1, 1923,	Park . . .	4s	1,000 00	
July	1, 1923,	School House . .	4½s	3,250 00	
July	1, 1923,	Building . . .	4½s	5,500 00	
July	1, 1923,	Street . . .	4½s	8,000 00	
July	1, 1923,	Street . . .	4s	4,800 00	
July	1, 1923,	Street . . .	4s	1,000 00	
July	1, 1923,	Street . . .	4s	3,500 00	
July	1, 1923,	Bridge . . .	4s	400 00	
July	1, 1923,	Sewer . . .	4s	1,000 00	
July	1, 1923,	Park . . .	4s	1,000 00	
July	1, 1923,	Street . . .	4s	500 00	
July	1, 1923,	Street . . .	4½s	2,000 00	
Aug.	1, 1923,	Street . . .	4s	12,000 00	
Sept.	1, 1923,	Street . . .	4s	6,000 00	
Sept.	1, 1923,	Park . . .	3½s	2,000 00	
Sept.	1, 1923,	Street . . .	4½s	800 00	
Sept.	1, 1923,	Hospital . . .	4½s	3,000 00	
Sept.	1, 1923,	Building . . .	4½s	1,000 00	
Sept.	1, 1923,	Street . . .	4½s	2,000 00	
Oct.	1, 1923,	Street . . .	4s	2,750 00	
Oct.	1, 1923,	Street . . .	3½s	6,350 00	
Oct.	1, 1923,	Street . . .	4s	500 00	
Oct.	1, 1923,	Street . . .	4½s	500 00	
Oct.	1, 1923,	Street . . .	4½s	2,000 00	
Oct.	1, 1923,	Street . . .	4½s	10,000 00	
Oct.	1, 1923,	Street . . .	4½s	1,000 00	
Oct.	1, 1923,	Street . . .	4½s	10,000 00	
Oct.	1, 1923,	Street . . .	4½s	2,500 00	
Oct.	1, 1923,	Street . . .	4½s	20,000 00	
Oct.	1, 1923,	Sewer Cons't . .	4½s	500 00	
Oct.	1, 1923,	Sewer Cons't . .	4½s	1,500 00	
Oct.	1, 1923,	School House . .	4½s	1,000 00	
Oct.	1, 1923,	Hospital . . .	4½s	8,000 00	
Nov.	1, 1923,	Sewer . . .	3½s	500 00	
Nov.	1, 1923,	Street . . .	4s	5,000 00	
Dec.	1, 1923,	Street . . .	4s	700 00	
Dec.	1, 1923,	Municipal . . .	4s	1,000 00	
Dec.	1, 1923,	Street . . .	4s	400 00	
Dec.	1, 1923,	Sewer Sep. System .	4s	500 00	
Amount carried forward					$858,550 00

Amount brought forward					$858,550 00
Dec.	1, 1923,	Dept. Equipment	4½s	7,000 00	
Dec.	1, 1923,	Street Cons't	4½s	20,000 00	
Dec.	1, 1923,	Street Cons't	4½s	3,250 00	
Dec.	1, 1923,	Sewer Cons't	4½s	1,000 00	
Dec.	1, 1923,	Building	4½s	3,000 00	
Dec.	1, 1923,	Sewer Cons't	4½s	500 00	
Dec.	1, 1923,	Playground	4s	300 00	
Jan.	1, 1924,	Sewer	4s	500 00	
Jan.	1, 1924,	School House	4s	3,250 00	
Feb.	1, 1924,	Street	4s	600 00	
Feb.	1, 1924,	Sewer	4s	500 00	
Mar.	1, 1924,	Hospital	4s	4,500 00	
Mar.	1, 1924,	Building (Hospital)	4s	2,000 00	
Mar.	1, 1924,	Sewer	4s	500 00	
Apr.	1, 1924,	Sewer Construction	4½s	500 00	
May	1, 1924,	Sewer Sep. System	4s	1,000 00	
May	1, 1924,	Sewer	3½s	500 00	
May	1, 1924,	Cambridge Bridge	4s	2,000 00	
July	1, 1924,	Street	4s	1,000 00	
July	1, 1924,	Street	4s	3,500 00	
July	1, 1924,	Street	3½s	2,500 00	
July	1, 1924,	Street	4s	2,000 00	
July	1, 1924,	Building	4s	4,000 00	
July	1, 1924,	Sewer	4s	500 00	
July	1, 1924,	Sewer Sep. System	4s	500 00	
July	1, 1924,	Playground	4s	1,500 00	
July	1, 1924,	Park	4s	1,000 00	
July	1, 1924,	School House	4½s	3,250 00	
July	1, 1924,	Street	4½s	2,000 00	
July	1, 1924,	Street	4s	4,800 00	
July	1, 1924,	Street	4s	3,500 00	
July	1, 1924,	Bridge	4s	400 00	
July	1, 1924,	Sewer Sep. System	4s	1,000 00	
July	1, 1924,	Park	4s	1,000 00	
July	1, 1924,	Street	4s	500 00	
July	1, 1924,	School House	4½s	5,000 00	
July	1, 1924,	Building	4½s	4,000 00	
July	1, 1924,	Sewer	4½s	1,500 00	
Aug.	1, 1924,	Street	4s	12,000 00	
Sept.	1, 1924,	Street	4s	6,000 00	
Sept.	1, 1924,	Park	3½s	2,000 00	
Sept.	1, 1924,	Street	4½s	800 00	
Sept.	1, 1924,	Hospital	4½s	3,000 00	
Sept.	1, 1924,	Building	4½s	1,000 00	
Sept.	1, 1924,	Street	4½s	2,000 00	
Oct.	1, 1924,	Street	4s	2,750 00	
Oct.	1, 1924,	Street	3½s	6,350 00	
Oct.	1, 1924,	Street	4s	500 00	
Oct.	1, 1924,	Street	4½s	500 00	
Oct.	1, 1924,	Street	4½s	2,000 00	
Oct.	1, 1924,	Street	4½s	10,000 00	
Oct.	1, 1924,	Street	4½s	1,000 00	
Oct.	1, 1924,	Street	4½s	10,000 00	
Oct.	1, 1924,	Street	4½s	2,500 00	
Amount carried forward					$1,015,300 00

Amount brought forward				$1,015,300 00
Oct.	1, 1924,	Street	4½s	20,000 00
Oct.	1, 1924,	Sewer Cons't	4½s	500 00
Oct.	1, 1924,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1924,	School House	4½s	1,000 00
Oct.	1, 1924,	Hospital	4½s	8,000 00
Nov.	1, 1924,	Sewer	3½s	500 00
Nov.	1, 1924,	Street	4s	5,000 00
Dec.	1, 1924,	Street	4s	700 00
Dec.	1, 1924,	Street	4s	400 00
Dec.	1, 1924,	Sewer	4s	500 00
Dec.	1, 1924,	Street Cons't	4½s	3,250 00
Dec.	1, 1924,	Building	4½s	3,000 00
Dec.	1, 1924,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1924	Sewer Cons't	4½s	500 00
Dec.	1, 1924,	Playground	4s	300 00
Jan.	1, 1925,	Sewer	4s	500 00
Jan.	1, 1925,	Street	4s	3,250 00
Feb.	1, 1925,	Street	4s	600 00
Feb.	1, 1925,	Building (School House)	4s	500 00
Mar.	1, 1925,	Hospital	4s	4,500 00
Mar.	1, 1925,	Building (Hospital)	4s	2,000 00
Mar.	1, 1925,	Sewer	4s	500 00
Apr.	1, 1925,	Sewer Construction	4½s	500 00
May	1, 1925,	Sewer Sep. System	4s	1,000 00
May	1, 1925,	Sewer	3½s	500 00
May	1, 1925,	Cambridge Bridge	4s	2,000 00
July	1, 1925,	Street	4s	1,000 00
July	1, 1925,	Street	4s	3,500 00
July	1, 1925,	Street	3½s	1,000 00
July	1, 1925,	Street	4s	2,000 00
July	1, 1925,	Building	4s	4,000 00
July	1, 1925,	Sewer	4s	500 00
July	1, 1925,	Sewer Sep. System	4s	500 00
July	1, 1925,	Playground	4s	1,500 00
July	1, 1925,	Park	4s	1,000 00
July	1, 1925,	School House	4½s	3,250 00
July	1, 1925,	Street	4½s	2,000 00
July	1, 1925,	Bridge	4s	400 00
July	1, 1925,	Sewer Sep. System	4s	1,000 00
July	1, 1925,	Park	4s	1,000 00
July	1, 1925,	School House	4½s	5,000 00
July	1, 1925,	Building	4½s	4,000 00
July	1, 1925,	Sewer	4½s	1,500 00
Sept.	1, 1925,	Building	4½s	1,000 00
Sept.	1, 1925,	Street	4½s	2,000 00
Sept.	1, 1925,	Street	4s	6,000 00
Sept.	1, 1925,	Park	3½s	2,000 00
Sept.	1, 1925,	Hospital	4½s	3,000 00
Oct.	1, 1925,	Street	4s	2,750 00
Oct.	1, 1925,	Street	3½s	6,350 00
Oct.	1, 1925,	Street	4s	500 00
Oct.	1, 1925,	Street	4½s	10,000 00
Oct.	1, 1925,	Street	4½s	2,500 00
Oct.	1, 1925,	Street	4½s	20,000 00
Oct.	1, 1925,	Sewer Cons't	4½s	500 00
Amount carried forward				$1,167,050 00

Amount brought forward				$1,167,050 00
Oct.	1, 1925,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1925,	School House	4½s	1,000 00
Oct.	1, 1925,	Hospital	4½s	8,000 00
Nov.	1, 1925,	Sewer	3½s	500 00
Nov.	1, 1925,	Street	4s	5,000 00
Dec.	1, 1925,	Sewer Sep. System	4s	500 00
Dec.	1, 1925,	Street	4s	700 00
Dec.	1, 1925	Street Cons't	4½s	3,250 00
Dec.	1, 1925,	Building	4½s	3,000 00
Dec.	1, 1925,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1925,	Sewer Cons't	4½s	500 00
Dec.	1, 1925,	Playground	4s	300 00
Jan.	1, 1926,	Sewer	4s	500 00
Jan.	1, 1926,	Street	4s	3,250 00
Feb.	1, 1926,	Street	4s	600 00
Feb.	1, 1926,	Building (School House)	4s	500 00
Mar.	1, 1926,	Hospital	4s	4,500 00
Mar.	1, 1926,	Building (Hospital)	4s	2,000 00
Mar.	1, 1926,	Sewer	4s	500 00
Apr.	1, 1926,	Sewer Construction	4½s	500 00
May	1, 1926,	Sewer Sep. System	4s	1,000 00
May	1, 1926,	Sewer	3½s	500 00
May	1, 1926,	Cambridge Bridge	4s	2,000 00
July	1, 1926,	Street	4s	3,500 00
July	1, 1926,	Street	3½s	1,000 00
July	1, 1926,	Building	4s	4,000 00
July	1, 1926,	School House	4½s	5,000 00
July	1, 1926,	Building	4½s	4,000 00
July	1, 1926,	Sewer	4½s	1,500 00
July	1, 1926,	Sewer	4s	500 00
July	1, 1926,	Sewer Sep. System	4s	500 00
July	1, 1926,	Playground	4s	1,000 00
July	1, 1926,	Park	4s	1,000 00
July	1, 1926,	School House	4½s	3,250 00
July	1, 1926,	Street	4½s	2,000 00
July	1, 1926,	Bridge	4s	400 00
July	1, 1926,	Sewer Sep. System	4s	1,000 00
July	1, 1926,	Park	4s	1,000 00
Sept.	1, 1926,	Hospital	4½s	3,000 00
Sept.	1, 1926,	Park	3½s	2,000 00
Sept.	1, 1926,	Building	4½s	1,000 00
Sept.	1, 1926,	Street	4½s	2,000 00
Oct.	1, 1926,	Street	4s	2,750 00
Oct.	1, 1926,	Street	3½s	6,350 00
Oct.	1, 1926,	Street	4½s	10,000 00
Oct.	1, 1926,	Street	4½s	2,500 00
Oct.	1, 1926,	Street	4½s	20,000 00
Oct.	1, 1926,	Sewer Cons't	4½s	500 00
Oct.	1, 1926,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1926,	School House	4½s	1,000 00
Oct.	1, 1926,	Hospital	4½s	8,000 00
Nov.	1, 1926,	Sewer	3½s	500 00
Dec.	1, 1926,	Sewer Sep. System	4s	500 00
Dec.	1, 1926,	Street Cons't	4½s	3,250 00
Dec.	1, 1926,	Building	4½s	3,000 00
Amount carried forward				$1,305,650 00

Amount brought forward				$1,305,650 00
Dec.	1, 1926,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1926,	Sewer Cons't	4½s	500 00
Dec.	1, 1926,	Playground	4s	300 00
Jan.	1, 1927,	Sewer	4s	500 00
Jan.	1, 1927,	School House	4s	3,250 00
Feb.	1, 1927,	Building (School House)	4s	500 00
Mar.	1, 1927,	Hospital	4s	4,500 00
Mar.	1, 1927,	Building (Hospital)	4s	2,000 00
Apr.	1, 1927,	Sewer Construction	4½s	500 00
May	1, 1927.	Sewer	3½s	500 00
May	1, 1927,	Cambridge Bridge	4s	2,000 00
July	1, 1927,	Building	4s	4,000 00
July	1, 1927,	Sewer	4s	500 00
July	1, 1927,	Sewer Sep. System	4s	500 00
July	1, 1927,	Playground	4s	1,000 00
July	1, 1927,	Park	4s	1,000 00
July	1, 1927,	School House	4½s	3,250 00
July	1, 1927,	Street	4½s	2,000 00
July	1, 1927,	Bridge	4s	400 00
July	1, 1927,	Sewer Sep. System	4s	1,000 00
July	1, 1927,	Park	4s	1,000 00
July	1, 1927,	School House	4½s	5,000 00
July	1, 1927,	Building	4½s	4,000 00
July	1, 1927,	Sewer	4½s	1,500 00
Sept.	1, 1927,	Building	4½s	1,000 00
Sept.	1, 1927,	Street	4½s	2,000 00
Sept.	1, 1927,	Park	3½s	2,000 00
Sept.	1, 1927,	Hospital	4½s	3,000 00
Oct.	1, 1927,	Street	4½s	10,000 00
Oct.	1, 1927,	Street	4½s	2,500 00
Oct.	1, 1927,	Street	4½s	20,000 00
Oct.	1, 1927,	Sewer Cons't	4½s	500 00
Oct.	1, 1927,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1927,	School House	4½s	1,000 00
Oct.	1, 1927,	Hospital	4½s	8,000 00
Nov.	1, 1927,	Sewer	3½s	500 00
Dec.	1, 1927,	Sewer Sep. System	4s	500 00
Dec.	1, 1927,	Street Cons't	4½s	3,250 00
Dec.	1, 1927,	Building	4½s	3,000 00
Dec.	1, 1927,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1927,	Sewer Cons't	4½s	500 00
Dec.	1, 1927,	Playground	4s	300 00
Jan.	1, 1928,	Sewer	4s	500 00
Jan.	1, 1928,	School House	4s	3,250 00
Feb.	1, 1928,	Building (School House)	4s	500 00
Mar.	1, 1928,	Hospital	4s	4,500 00
Mar.	1, 1928,	Building (Hospital)	4s	2,000 00
Apr.	1, 1928,	Sewer Construction	4½s	500 00
May	1, 1928,	Sewer	3½s	500 00
May	1, 1928,	Cambridge Bridge	4s	2,000 00
July	1, 1928,	Building	4s	4,000 00
July	1, 1928,	Sewer	4s	500 00
July	1, 1928,	Sewer Sep. System	4s	500 00
July	1, 1928,	Playground	4s	1,000 00
July	1, 1928,	Park	4s	1,000 00
Amount carried forward				$1,427,650 00

Amount brought forward				$1,427,650 00
July	1, 1928,	School House	4½s	3,250 00
July	1, 1928,	Street	4½s	2,000 00
July	1, 1928,	Bridge	4s	400 00
July	1, 1928,	Sewer Sep. System	4s	1,000 00
July	1, 1928,	Park	4s	1,000 00
July	1, 1928,	School House	4½s	5,000 00
July	1, 1928,	Building	4½s	4,000 00
July	1, 1928,	Sewer	4½s	1,000 00
Sept.	1, 1928,	Building	4½s	1,000 00
Sept.	1, 1928,	Park	3½s	2,000 00
Sept.	1, 1928,	Hospital	4½s	3,000 00
Oct.	1, 1928,	Street	4½s	10,000 00
Oct.	1, 1928,	Street	4½s	2,500 00
Oct.	1, 1928,	Street	4½s	10,000 00
Oct.	1, 1928,	Sewer Cons't	4½s	500 00
Oct.	1, 1928,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1928,	School House	4½s	1,000 00
Oct.	1, 1928,	Hospital	4½s	8,000 00
Nov.	1, 1928,	Sewer	3½s	500 00
Dec.	1, 1928,	Sewer Sep. System	4s	500 00
Dec.	1, 1928,	Street Cons't	4½s	3,250 00
Dec.	1, 1928,	Building	4½s	3,000 00
Dec.	1, 1928,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1928,	Sewer Cons't	4½s	500 00
Dec.	1, 1928,	Playground	4s	300 00
Jan.	1, 1929,	Sewer	4s	500 00
Jan.	1, 1929,	School House	4s	3,250 00
Feb.	1, 1929,	Building (School House)	4s	500 00
Mar.	1, 1929,	Hospital	4s	4,500 00
Mar.	1, 1929,	Building (Hospital)	4s	2,000 00
Apr.	1, 1929,	Sewer Construction	4½s	500 00
May	1, 1929,	Sewer	3½s	500 00
May	1, 1929,	Cambridge Bridge	4s	2,000 00
July	1, 1929,	Building	4s	4,000 00
July	1, 1929,	Sewer	4s	500 00
July	1, 1929,	Sewer Sep. System	4s	500 00
July	1, 1929,	Playground	4s	1,000 00
July	1, 1929,	Park	4s	1,000 00
July	1, 1929,	School House	4½s	3,250 00
July	1, 1929,	Street	4½s	2,000 00
July	1, 1929,	Bridge	4s	400 00
July	1, 1929,	Sewer Sep. System	4s	1,000 00
July	1, 1929,	Park	4s	1,000 00
July	1, 1929,	School House	4½s	5,000 00
July	1, 1929,	Building	4½s	4,000 00
July	1, 1929,	Sewer	4½s	1,000 00
Sept.	1, 1929,	Building	4½s	1,000 00
Sept.	1, 1929,	Park	3½s	2,000 00
Sept.	1, 1929,	Hospital	4½s	3,000 00
Oct.	1, 1929,	Street	4½s	10,000 00
Oct.	1, 1929,	Street	4½s	2,500 00
Oct.	1, 1929,	Street	4½s	10,000 00
Oct.	1, 1929,	Sewer Cons't	4½s	500 00
Oct.	1, 1929,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1929,	School House	4½s	1,000 00
Amount carried forward				$1,563,750 00

Amount brought forward				$1,563,750 00
Oct.	1, 1929,	Hospital	4½s	8,000 00
Nov.	1, 1929,	Sewer	3½s	500 00
Dec.	1, 1929,	Sewer Sep. System	4s	500 00
Dec.	1, 1929,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1929,	Sewer Cons't	4½s	500 00
Dec.	1, 1929,	Playground	4s	300 00
Jan.	1, 1930,	Sewer	4s	500 00
Jan.	1, 1930,	School House	4s	3,250 00
Feb.	1, 1930,	Building (School House)	4s	500 00
Mar.	1, 1930,	Hospital	4s	4,500 00
Mar.	1, 1930,	Building (Hospital)	4s	2,000 00
Apr.	1, 1930,	Sewer Construction	4½s	500 00
May	1, 1930,	Sewer	3½s	500 00
May	1, 1930,	Cambridge Bridge	4s	2,000 00
July	1, 1930,	Building	4s	4,000 00
July	1, 1930,	Sewer	4s	500 00
July	1, 1930,	Sewer Sep. System	4s	500 00
July	1, 1930,	Playground	4s	1,000 00
July	1, 1930,	Park	4s	1,000 00
July	1, 1930,	School House	4½s	3,250 00
July	1, 1930,	Street	4½s	2,000 00
July	1, 1930,	Bridge	4s	400 00
July	1, 1930,	Sewer Sep. System	4s	1,000 00
July	1, 1930,	Park	4s	1,000 00
July	1, 1930,	Building	4½s	1,000 00
Sept.	1, 1930,	Building	4½s	1,000 00
Sept.	1, 1930,	Park	3½s	2,000 00
Sept.	1, 1930,	Hospital	4½s	3,000 00
Oct.	1, 1930,	Sewer Cons't	4½s	500 00
Oct.	1, 1930,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1930,	School House	4½s	1,000 00
Oct.	1, 1930,	Hospital	4½s	8,000 00
Nov.	1, 1930,	Sewer	3½s	500 00
Dec.	1, 1930,	Sewer Sep. System	4s	500 00
Dec.	1, 1930,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1930,	Sewer Cons't	4½s	500 00
Dec.	1, 1930,	Playground	4s	300 00
Jan.	1, 1931,	Sewer	4s	500 00
Jan.	1, 1931,	School House	4s	3,250 00
Feb.	1, 1931,	Building (School House)	4s	500 00
Mar.	1, 1931,	Hospital	4s	4,500 00
Mar.	1, 1931,	Building (Hospital)	4s	2,000 00
Apr.	1, 1931,	Sewer Construction	4½s	500 00
May	1, 1931,	Sewer	3½s	500 00
May	1, 1931,	Cambridge Bridge	4s	2,000 00
July	1, 1931,	School House	4½s	5,000 00
July	1, 1931,	Building	4½s	4,000 00
July	1, 1931,	Sewer	4½s	1,000 00
July	1, 1931,	Building	4s	4,000 00
July	1, 1931,	Sewer	4s	500 00
July	1, 1931,	Sewer Sep. System	4s	500 00
July	1, 1931,	Playground	4s	1,000 00
July	1, 1931,	Park	4s	1,000 00
July	1, 1931,	Street	4½s	2,000 00
July	1, 1931,	Bridge	4s	400 00
Amount carried forward				$1,656,900 00

Amount brought forward				$1,656,900 00
July	1, 1931,	Sewer Sep. System	4s	1,000 00
July	1, 1931,	Park	4s	1,000 00
Sept.	1, 1931,	Park	3½s	2,000 00
Sept.	1, 1931,	Building	4½s	1,000 00
Oct.	1, 1931,	Sewer Cons't	4½s	500 00
Oct.	1, 1931,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1931,	School House	4½s	1,000 00
Oct.	1, 1931,	Hospital	4½s	8,000 00
Nov.	1, 1931,	Sewer	3½s	500 00
Dec.	1, 1931,	Sewer Sep. System	4s	500 00
Dec.	1, 1931,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1931,	Sewer Cons't	4½s	500 00
Dec.	1, 1931,	Playground	4s	300 00
Jan.	1, 1932,	Sewer	4s	500 00
Jan.	1, 1932,	School House	4s	3,250 00
Feb.	1, 1932,	Building (School House)	4s	500 00
Mar.	1, 1932,	Hospital	4s	4,500 00
Mar.	1, 1932,	Building (Hospital)	4s	2,000 00
Apr.	1, 1932,	Sewer Construction	4½s	500 00
May	1, 1932,	Sewer	3½s	500 00
May	1, 1932,	Cambridge Bridge	4s	2,000 00
July	1, 1932,	Building	4s	4,000 00
July	1, 1932,	Sewer	4s	500 00
July	1, 1932,	Sewer Sep. System	4s	500 00
July	1, 1932,	Playground	4s	1,000 00
July	1, 1932,	Park	4s	1,000 00
July	1, 1932,	School House	4½s	3,250 00
July	1, 1932,	Street	4½s	2,000 00
July	1, 1932,	Bridge	4s	400 00
July	1, 1932,	Sewer Sep. System	4s	1,000 00
July	1, 1932,	Park	4s	1,000 00
July	1, 1932,	School House	4½s	5,000 00
July	1, 1932,	Building	4½s	4,000 00
July	1, 1932,	Sewer	4½s	1,000 00
Sept.	1, 1932,	Building	4½s	1,000 00
Sept.	1, 1932,	Park	3½s	2,000 00
Sept.	1, 1932,	Hospital	4½s	3,000 00
Oct.	1, 1932,	Sewer Cons't	4½s	500 00
Oct.	1, 1932,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1932,	School House	4½s	1,000 00
Oct.	1, 1932,	Hospital	4½s	8,000 00
Nov.	1, 1932,	Sewer	3½s	500 00
Dec.	1, 1932,	Sewer Sep. System	4s	500 00
Dec.	1, 1932,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1932,	Sewer Cons't	4½s	500 00
Dec.	1, 1932,	Playground	4s	300 00
Jan.	1, 1933,	Sewer	4s	500 00
Jan.	1, 1933,	School House	4s	3,250 00
Feb.	1, 1933,	Building (School House)	4s	500 00
Mar.	1, 1933,	Hospital	4s	4,500 00
Mar.	1, 1933,	Building (Hospital)	4s	2,000 00
Apr.	1, 1933,	Sewer Construction	4½s	500 00
May	1, 1933,	Cambridge Bridge	4s	2,000 00
May	1, 1933,	Sewer	3½s	500 00
July	1, 1933,	Building	4s	4,000 00
Amount carried forward				$1,751,650 00

Amount brought forward				$1,751,650 00
July	1, 1933,	Sewer	4s	500 00
July	1, 1933,	Sewer Sep. System	4s	500 00
July	1, 1933,	Playground	4s	1,000 00
July	1, 1933,	Park	4s	1,000 00
July	1, 1933,	School House	4½s	3,250 00
July	1, 1933,	Street	4½s	2,000 00
July	1, 1933,	Bridge	4s	400 00
July	1, 1933,	Sewer Sep. System	4s	1,000 00
July	1, 1933,	Park	4s	1,000 00
July	1, 1933,	School House	4½s	5,000 00
July	1, 1933,	Building	4½s	4,000 00
July	1, 1933,	Sewer	4½s	1,000 00
Sept.	1, 1933,	Building	4½s	1,000 00
Sept.	1, 1933,	Park	3½s	1,000 00
Sept.	1, 1933,	Hospital	4½s	3,000 00
Oct.	1, 1933,	Sewer Cons't	4½s	500 00
Oct.	1, 1933,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1933,	School House	4½s	1,000 00
Oct.	1, 1933,	Hospital	4½s	8,000 00
Nov.	1, 1933,	Sewer	3½s	500 00
Dec.	1, 1933,	Sewer Sep. System	4s	500 00
Dec.	1, 1933,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1933,	Sewer Cons't	4½s	500 00
Dec.	1, 1933,	Playground	4s	300 00
Jan.	1, 1934,	Sewer	4s	500 00
Jan.	1, 1934,	School House	4s	3,250 00
Feb.	1, 1934,	Building (School House)	4s	500 00
Mar.	1, 1934,	Hospital	4s	4,500 00
Mar.	1, 1934,	Building (Hospital)	4s	2,000 00
Apr.	1, 1934,	Sewer Construction	4½s	500 00
May	1, 1934,	Sewer	3½s	500 00
May	1, 1934,	Cambridge Bridge	4s	2,000 00
July	1, 1934,	Building	4s	4,000 00
July	1, 1934,	Sewer	4s	500 00
July	1, 1934,	Sewer Sep. System	4s	500 00
July	1, 1934,	Playground	4s	1,000 00
July	1, 1934,	Park	4s	1,000 00
July	1, 1934,	Street	4s	400 00
July	1, 1934,	Sewer Sep. System	4s	1,000 00
July	1, 1934,	Park	4s	1,000 00
July	1, 1934,	School House	4½s	5,000 00
July	1, 1934,	Building	4½s	4,000 00
July	1, 1934,	Sewer	4½s	1,000 00
Sept.	1, 1934,	Building	4½s	1,000 00
Sept.	1, 1934,	Park	3½s	1,000 00
Sept.	1, 1934,	Hospital	4½s	3,000 00
Oct.	1, 1934,	Sewer Cons't	4½s	500 00
Oct.	1, 1934,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1934,	School House	4½s	1,000 00
Oct.	1, 1934,	Hospital	4½s	8,000 00
Nov.	1, 1934,	Sewer	3½s	500 00
Dec.	1, 1934,	Sewer Sep. System	4s	500 00
Dec.	1, 1934,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1934,	Sewer Cons't	4½s	500 00
Dec.	1, 1934,	Playground	4s	300 00
Amount carried forward				$1,843,050 00

Amount brought forward				$1,843,050 00
Jan.	1, 1935,	Sewer	4s	500 00
Jan.	1, 1935,	School House	4s	3,250 00
Feb.	1, 1935,	Building (School House)	4s	500 00
Mar.	1, 1935,	Hospital	4s	4,500 00
Mar.	1, 1935,	Building (Hospital)	4s	2,000 00
Apr.	1, 1935,	Sewer Construction	4½s	500 00
May	1, 1935,	Sewer	3½s	500 00
May	1, 1935,	Cambridge Bridge	4s	2,000 00
July	1, 1935,	Building	4s	4,000 00
July	1, 1935,	Sewer	4s	500 00
July	1, 1935,	Sewer Sep. System	4s	500 00
July	1, 1935,	Playground	4s	1,000 00
July	1, 1935,	Park	4s	1,000 00
July	1, 1935,	Sewer Sep. System	4s	1,000 00
July	1, 1935,	Park	4s	1,000 00
July	1, 1935,	School House	4½s	5,000 00
July	1, 1935,	Building	4½s	4,000 00
July	1, 1935,	Sewer	4½s	1,000 00
Sept.	1, 1935,	Building	4½s	1,000 00
Sept.	1, 1935,	Park	3½s	1,000 00
Oct.	1, 1935,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1935,	Hospital	4½s	8,000 00
Nov.	1, 1935,	Sewer	3½s	500 00
Dec.	1, 1935,	Sewer Sep. System	4s	500 00
Dec.	1, 1935,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1935,	Sewer Cons't	4½s	500 00
Dec.	1, 1935,	Playground	4s	300 00
Jan.	1, 1936,	Sewer	4s	500 00
Feb.	1, 1936,	Building (School House)	4s	500 00
Mar.	1, 1936,	Hospital	4s	4,500 00
Mar.	1, 1936,	Building (Hospital)	4s	2,000 00
Apr.	1, 1936,	Sewer Construction	4½s	500 00
May	1, 1936,	Sewer	3½s	500 00
May	1, 1936,	Cambridge Bridge	4s	2,000 00
July	1, 1936,	Sewer	4s	500 00
July	1, 1936,	Sewer Sep. System	4s	500 00
July	1, 1936,	Park	4s	1,000 00
July	1, 1936,	Sewer Sep. System	4s	1,000 00
July	1, 1936,	Park	4s	1,000 00
July	1, 1936,	School House	4½s	5,000 00
July	1, 1936,	Building	4½s	4,000 00
July	1, 1936,	Sewer	4½s	1,000 00
Sept.	1, 1936,	Building	4½s	1,000 00
Sept.	1, 1936,	Park	4s	1,000 00
Oct.	1, 1936,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1936,	Hospital	4½s	8,000 00
Nov.	1, 1936,	Sewer	3½s	500 00
Dec.	1, 1936,	Sewer Sep. System	4s	500 00
Dec.	1, 1936,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1936,	Sewer Cons't	4½s	500 00
Dec.	1, 1936,	Playground	4s	300 00
Jan.	1, 1937,	Sewer	4s	500 00
Apr.	1, 1937,	Sewer Construction	4½s	500 00
May	1, 1937,	Sewer	3½s	500 00
May	1, 1937,	Cambridge Bridge	4s	2,000 00
Amount carried forward				$1,932,400 00

Amount brought forward				$1,932,400 00
July	1, 1937,	Sewer	4s	500 00
July	1, 1937,	Sewer Sep. System	4s	500 00
July	1, 1937,	Park	4s	1,000 00
July	1, 1937,	Sewer Sep. System	4s	1,000 00
July	1, 1937,	Park	4s	1,000 00
July	1, 1937,	School House	4½s	5,000 00
July	1, 1937,	Building	4½s	4,000 00
July	1, 1937,	Sewer	4½s	1,000 00
July	1, 1937,	Building	4½s	1,000 00
Sept.	1, 1937,	Building	4½s	1,000 00
Sept.	1, 1937,	Park	3½s	1,000 00
Oct.	1, 1937,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1937,	Hospital	4½s	8,000 00
Dec.	1, 1937,	Sewer Sep. System	4s	500 00
Dec.	1, 1937,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1937,	Sewer Cons't	4½s	500 00
Jan.	1, 1938,	Sewer	4s	500 00
May	1, 1938,	Sewer	3½s	500 00
May	1, 1938,	Cambridge Bridge	4s	2,000 00
July	1, 1938,	Sewer	4s	500 00
July	1, 1938,	Sewer Sep. System	4s	500 00
July	1, 1938,	Park	4s	1,000 00
July	1, 1938,	Sewer Sep. System	4s	1,000 00
July	1, 1938,	Park	4s	1,000 00
Sept.	1, 1938,	Park	3½s	1,000 00
July	1, 1938,	Sewer	4½s	1,000 00
Oct.	1, 1938,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1938,	Hospital	4½s	3,000 00
Dec.	1, 1938,	Sewer Sep. System	4s	500 00
Dec.	1, 1938,	Sewer Cons't	4½s	1,000 00
Dec.	1, 1938,	Sewer Cons't	4½s	500 00
Jan.	1, 1939,	Sewer	4s	500 00
May	1, 1939,	Sewer	3½s	500 00
May	1, 1939,	Cambridge Bridge	4s	2,000 00
July	1, 1939,	Sewer	4s	500 00
July	1, 1939,	Sewer Sep. System	4s	500 00
July	1, 1939,	Park	4s	1,000 00
July	1, 1939,	Sewer Sep. System	4s	1,000 00
July	1, 1939,	Park	4s	1,000 00
July	1, 1939,	Sewer	4½s	1,000 00
Sept.	1, 1939,	Park	3½s	1,000 00
Oct.	1, 1939,	Sewer Cons't	4½s	1,500 00
Oct.	1, 1939,	Hospital	4½s	3,000 00
Dec.	1, 1939,	Sewer Sep. System	4s	500 00
Dec.	1, 1939,	Sewer Cons't	4½s	500 00
Jan.	1, 1940,	Sewer	4s	500 00
May	1, 1940,	Sewer	3½s	500 00
May	1, 1940,	Cambridge Bridge	4s	2,000 00
July	1, 1940,	Sewer	4s	500 00
July	1, 1940,	Sewer Sep. System	4s	500 00
July	1, 1940,	Park	4s	1,000 00
July	1, 1940,	Sewer Sep. System	4s	1,000 00
July	1, 1940,	Park	4s	1,000 00
July	1, 1940,	Sewer	4½s	1,000 00
Sept.	1, 1940,	Park	3½s	1,000 00
Amount carried forward				$1,999,900 00

Amount brought forward					$1,999,900 00
Oct.	1, 1940,	Sewer Cons't	.	4½s	1,500 00
Dec.	**1, 1940,**	Sewer Sep. System	.	4s	500 00
Dec.	1, 1940,	Sewer Cons't	.	4½s	500 00
Jan.	1, 1941,	Sewer	.	4s	500 00
May	1, 1941,	Sewer	.	3½s	500 00
May	**1, 1941,**	Cambridge Bridge	.	4s	2,000 00
July	**1, 1941,**	Sewer	.	4s	500 00
July	**1, 1941,**	Sewer Sep. System	.	4s	500 00
July	**1, 1941,**	Sewer Sep. System	.	4s	1,000 00
July	**1, 1941,**	Park	.	3½s	1,000 00
July	1, 1941.	Sewer	.	4½s	1,000 00
Sept.	**1, 1941,**	Park	.	4s	1,000 00
Oct.	1, 1941,	Sewer Cons't	.	4½s	1,500 00
Dec.	**1, 1941,**	Sewer Sep. System	.	4s	500 00
Dec.	1, 1941,	Sewer Cons't	.	4½s	500 00
Jan.	1, 1942,	Sewer	.	4s	500 00
May	1, 1942,	Sewer	.	3½s	500 00
May	1, 1942,	Cambridge Bridge	.	4s	2,000 00
July	1, 1942,	Sewer	.	4s	500 00
July	1, 1942,	Sewer Sep. System	.	4s	500 00
July	1, 1942,	Sewer Sep. System	.	4s	1,000 00
July	1, 1942,	Park	.	4s	1,000 00
July	1, 1942,	Sewer	.	4½s	1,500 00
Sept.	**1, 1942,**	Park	.	3½s	1,000 00
Oct.	1, 1942.	Sewer Cons't	.	4½s	1,500 00
Dec.	**1, 1942,**	Sewer Sep. System	.	4s	500 00
Dec.	1, 1942.	Sewer Cons't	.	4½s	500 00
Jan.	1, 1943,	Sewer	.	4s	500 00
May	1, 1943,	Sewer	.	3½s	500 00
May	**1, 1943,**	Cambridge Bridge	.	4s	2,000 00
July	**1, 1943,**	Sewer	.	4s	500 00
July	**1, 1943,**	Sewer Sep. System	.	4s	500 00
July	**1, 1943,**	Sewer Sep. System	.	4s	1,000 00
July	**1, 1943,**	Park	.	4s	1,000 00
Oct.	1, 1943,	Sewer Cons't	.	4½s	1,000 00
July	1, 1943,	Sewer	.	4½s	1,500 00
Dec.	**1, 1943,**	Sewer Sep. System	.	4s	500 00
Dec.	1, 1943,	Sewer Cons't	.	4½s	500 00
Jan.	1, 1944,	Sewer	.	4s	500 00
May	1, 1944,	Sewer	.	3½s	500 00
May	**1, 1944,**	Cambridge Bridge	.	4s	2,000 00
July	**1, 1944,**	Sewer	.	4s	500 00
July	**1, 1944,**	Sewer Sep. System	.	4s	500 00
July	**1, 1944,**	Sewer Sep. System	.	4s	1,000 00
July	**1, 1944,**	Park	.	4s	1,000 00
July	1, 1944.	Sewer	.	4½s	1,000 00
Oct.	1, 1944,	Sewer Cons't	.	4½s	1,500 00
Dec.	**1, 1944,**	Sewer Sep. System	.	4s	500 00
Dec.	1, 1944,	Sewer Cons't	.	4½s	500 00
Jan.	1, 1945,	Sewer	.	4s	500 00
May	1, 1945,	Sewer	.	3½s	500 00
May	1, 1945.	Cambridge Bridge	.	4s	2,000 00
July	1, 1945.	Sewer	.	4s	500 00
July,	1, 1945.	Sewer Sep. System	.	4s	500 00
Oct.	1, 1945,	Sewer Cons't	.	4½s	1,500 00
Amount carried forward					$2,048,400 00

Amount brought forward						$2,048,400 00
Oct.	1, 1946,	Sewer	Cons't	. .	4½s	1,500 00
Oct.	1, 1947,	Sewer	Cons't	. .	4½s	1,500 00
Oct.	1, 1948,	Sewer	Cons't	. .	4½s	1,500 00
Oct.	1, 1949,	Sewer	Cons't	. .	4½s	1,500 00
July	1, 1945,	Sewer		. . .	4½s	1,000 00
Dec.	1, 1945,	Sewer	Cons't	. .	4½s	500 00
Jan.	1, 1946,	Sewer		. . .	4s	500 00
May	1, 1946,	Sewer		. . .	3½s	500 00
July	1, 1946,	Sewer		. . .	4½s	1,000 00
Dec.	1, 1946,	Sewer	Cons't	. .	4½s	500 00
July	1, 1947,	Sewer		. . .	4½s	1,000 00
Dec.	1, 1947,	Sewer	Cons't	. .	4½s	500 00
Dec.	1, 1948,	Sewer	Cons't	. . .	4½s	500 00
						$2,060,400 00

The bonded City Debt matures as follows, viz:—

Provided for by Sinking Fund.

July	1, 1920,	Municipal	4s	8,000 00
Nov.	1, 1920,	Harvard Bridge	4s	5,000 00
Nov.	1, 1920,	Street	3½s	21,000 00
Mar.	1, 1921,	Street	3½s	25,800 00
Mar.	1, 1921,	Street	4s	25,000 00
Mar.	1, 1921,	Street	3½s	25,000 00
July	1, 1921,	Harvard Bridge	4s	60,000 00
July	1, 1921,	Street	3½s	30,000 00
July	1, 1921,	Cambridge Bridge	3½s	24,000 00
July	1, 1921,	School House	3½s	76,000 00
July	1, 1921,	Street	3½s	55,000 00
July	1, 1921,	Municipal	3½s	25,000 00
July	1, 1921,	Cemetery	3½s	8,000 00
Nov.	1, 1921,	Public Library	3½s	27,000 00
Dec.	1, 1921,	Chas. River Basin Assn.	4s	60,000 00
Dec.	1, 1921,	Street	4s	17,000 00
Mar.	1, 1922,	Municipal	3½s	15,500 00
July	1, 1922,	Hospital	3½s	6,000 00
July	1, 1922,	School House	3½s	86,500 00
July	1, 1922,	Street	3½s	30,000 00
Sept.	1, 1922,	Municipal	4s	35,000 00
Sept.	1, 1922,	Street	4s	7,000 00
Sept.	1, 1922,	Street	4s	118,000 00
Oct.	1, 1922,	School House	3½s	11,000 00
Nov.	1, 1922,	Street	3½s	14,000 00
Feb.	1, 1923,	Municipal	4s	4,800 00
Feb.	1, 1923,	Municipal	4s	35,000 00
Feb.	1, 1923,	Street	4s	10,000 00
Feb.	1, 1923,	Street	4s	3,000 00
Apr.	1, 1923,	Street	3½s	4,000 00
Apr.	1, 1923,	Building	3½s	3,000 00
July	1, 1923,	Street	4s	57,800 00
July	1, 1923,	Municipal	4s	25,000 00
Aug.	1, 1923,	Harvard Bridge	4s	10,000 00
Oct.	1, 1923,	School House	3½s	80,000 00
Nov.	1, 1923,	Street	3½s	12,000 00
Feb.	1, 1924,	Park	4s	360,000 00
Apr.	1, 1924,	Building	3½s	25.000 00
Apr.	1, 1924,	School House	3½s	80,000 00
Amount carried forward				$1,524,400 00

Amount brought forward				$1,524,400 00
May	1, 1924,	School House	3½s	5,000 00
Aug.	1, 1924,	Sewer	4s	75,000 00
Sept.	1, 1924,	Street	3½s	59,000 00
Nov.	1, 1924,	Building	3½s	6,000 00
Nov.	1, 1924,	School House	3½s	20,000 00
Nov.	1, 1924,	Street	3½s	6,500 00
May	1, 1925,	Street	3½s	84,000 00
May	1, 1925,	School House	3½s	20,950 00
Aug.	1, 1925,	School House	3½s	20,000 00
Oct.	1, 1925,	Sewer	4s	60,000 00
Nov.	1, 1925,	Street	3½s	1,500 00
May	1, 1926,	Street	4s	100,000 00
Aug.	1, 1926,	Park	4s	100,000 00
Aug.	1, 1926,	School House	4s	47,000 00
Aug.	1, 1926,	Street	4s	22,000 00
Oct.	1, 1926,	Park	4s	40,000 00
Apr.	1, 1927,	Street	4s	40,000 00
June	1, 1927,	Street	4s	19,000 00
Sept.	1, 1927,	Street	4s	25,000 00
Sept.	1, 1927,	Building	4s	30,000 00
Nov.	1, 1927,	Street	4s	10,000 00
Jan.	1, 1928,	Street	4s	34,000 00
Aug.	1, 1928,	Street	4s	42,000 00
Aug.	1, 1928,	Hospital	4s	20,000 00
Dec.	1, 1928,	School House	3½s	40,000 00
Mar.	1, 1929,	Street	3½s	20,000 00
Nov.	1, 1929,	Sewer	3½s	42,000 00
Jan.	1, 1930,	Street	3½s	13,500 00
Jan.	1, 1930,	School House	3½s	93,500 00
July	1, 1930,	Sewer	3½s	100,000 00
July	1, 1930,	School House	4s	120,000 00
July	1, 1930,	Cambridge Hospital	4s	95,000 00
July	1, 1930,	Street	4s	12,000 00
Mar.	1, 1931,	Street	3½s	27,000 00
Mar.	1, 1931,	School House	3½s	5,000 00
July	1, 1931,	Street	3½s	8,000 00
July	1, 1931,	Street	3½s	45,000 00
July	1, 1931,	School House	4½s	3,250 00
Aug.	1, 1931,	Sewer	3½s	110,000 00
Sept.	1, 1931,	Hospital	4½s	3,000 00
Dec.	1, 1931,	Hospital	3½s	4,000 00
Feb.	1, 1932,	Street	3½s	6,250 00
Feb.	1, 1932,	School	3½s	5,000 00
Mar.	1, 1932,	Hospital	3½s	25,000 00
Mar.	1, 1932,	School House	3½s	2,500 00
Amount carried forward				$3,191,350 00

Amount brought forward				$3,191,350 00
Aug.	1, 1932,	Metropolitan Park As.	3½s	46,000 00
Sept.	1, 1932,	Street . . .	3½s	6,200 00
Nov.	1, 1932,	Sewer . . .	3½s	20,000 00
Apr.	1, 1933,	Sewer . . .	3½s	40,000 00
July	1, 1933,	Street . . .	4s	4,000 00
Aug.	1, 1933,	Street . . .	4s	18,000 00
Oct.	1, 1933,	Sewer . . .	3½s	20,000 00
May	1, 1934,	Sewer . . .	3½s	112,000 00
May	1, 1934,	Camb. Bridge Special	3½s	28,000 00
Nov.	1, 1934,	Sewer . . .	3½s	5,000 00
May	1, 1935,	Sewer . . .	3½s	90,000 00
Aug.	1, 1935,	Park . . .	4s	100,000 00
Feb.	1, 1936,	Park . . .	4s	100,000 00
May	1, 1936,	Sewer . . .	4s	35,000 00
Sept.	1, 1936,	Sewer . . .	4s	25,000 00
Apr.	1, 1937,	Sewer . . .	4s	60,000 00
Sept.	1, 1937,	Park . . .	3½s	100,000 00
Nov.	1, 1937,	Sewer . . .	4s	10,000 00
Nov.	1, 1937,	Charles River Impr'ment	3½s	50,000 00
June	1, 1938,	Park . . .	3½s	50,000 00
Aug.	1, 1938,	Park . . .	3½s	50,000 00
Aug.	1, 1938,	Charles River Imp'ment	3½s	50,000 00
Aug.	1, 1938,	Sewer . . .	4s	25,000 00
Dec.	1, 1938,	Sewer . . .	4s	17,000 00
July	1, 1939,	Cambridge Bridge .	3½s	50,000 00
July	1, 1939,	Sewer . . .	3½s	2,000 00
Aug.	1, 1939,	Park . . .	3½s	100,000 00
Jan.	1, 1940,	Sewer . . .	3½s	46,000 00
May	1, 1940,	Sewer . . .	4s	15,000 00
July	1, 1940,	Cambridge Bridge .	3½s	100,000 00
July	1, 1940,	Park . . .	3½s	50,000 00
July	1, 1940,	Sewer . . .	4s	25,000 00
July	1, 1940,	Playground . .	4s	50,000 00
Nov.	1, 1940,	Park . . .	3½s	50,000 00
Feb.	1, 1941,	Cambridge Bridge .	3s	100,000 00
Mar.	1, 1941,	Sewer . . .	3½s	10,000 00
July	1, 1941,	Playground . .	3½s	15,000 00
July	1, 1941,	Sewer . . .	3½s	10,000 00
July	1, 1941,	Sewer . . .	3½s	10,000 00
Oct.	1, 1941,	Park . . .	3½s	100,000 00
Nov.	1, 1941,	Cambridge Bridge .	3½s	100,000 00
Amount carried forward				$5,085,550 00

Amount brought forward				$5,085,500 00
Dec.	1, 1941,	Sewer Sep. System	3½s	10,000 00
Dec.	1, 1941,	Playground	3½s	30,000 00
JULY	1, 1942,	PARK	3½s	48,000 00
Aug.	1, 1942,	Cambridge Bridge	3½s	100,000 00
Sept.	1, 1942,	Sewer	3½s	15,000 00
Jan.	1, 1943,	Cambridge Bridge	3½s	50,000 00
Feb.	1, 1943,	Sewer	3½s	10,000 00
Feb.	1, 1943,	Separate System	3½s	10,000 00
APR.	1, 1943,	CAMBRIDGE BRIDGE	3½s	50,000 00
Apr.	1, 1943,	Park	3½s	50,000 00
July	1, 1943,	Sewer	4s	25,000 00
Aug.	1, 1943,	Cambridge Bridge	3½s	50,000 00
Jan.	1, 1944,	Cambridge Bridge	3½s	100,000 00
MAY	1, 1944,	CAMBRIDGE BRIDGE	3½s	200,000 00
Aug.	1, 1944,	Cambridge Bridge	3½s	100,000 00
Sept.	1, 1944,	Cambridge Bridge	3½s	50,000 00
Sept.	1, 1944,	Park	3½s	25,000 00
Nov.	1, 1944,	Park	3½s	6,000 00
APR.	1, 1945,	PARK	3½s	5,000 00
May	1, 1945,	Park	3½s	45,000 00
May	1, 1945,	Cambridge Bridge	3½s	150,000 00
Aug.	1, 1945,	Park	3½s	5,000 00
Dec.	1, 1945,	Cambridge Bridge	3½s	100,000 00
Jan.	1, 1946,	Cambridge Bridge	3½s	20,000 00
Aug.	1, 1946,	CAMBRIDGE BRIDGE	4s	150,000 00
AUG.	1, 1946,	Commercial Ave. Bridge	3½s	50,000 00
Sept.	1, 1946,	Park	3½s	25,000 00
Sept.	1, 1946,	Cambridge Bridge	4s	5,000 00
Jan.	1, 1947,	Cambridge Bridge	3½s	50,000 00
JULY	1, 1947,	CAMBRIDGE BRIDGE	4s	40,000 00
Oct.	1, 1947,	Cambridge Bridge	4s	15,000 00
Oct.	1, 1947,	Park	4s	10,000 00
AUG.	1, 1948,	CAMBRIDGE BRIDGE	4s	45,000 00
Aug.	1, 1948,	Park	4s	30,000 00
Nov.	1, 1948,	Park	4s	12,000 00
JAN.	1, 1950,	PARK	3½s	8,800 00
July	1, 1950,	Cambridge Bridge	4s	20,000 00
Mar.	1, 1951,	Park	3½s	17,000 00
July	1, 1951,	PARK	3½s	7,000 00
Dec.	1, 1951,	Park	3½s	6,200 00
Dec.	1, 1951,	Bridge	3½s	10,000 00
Mar.	1, 1952,	Bridge	3½s	10,000 00
				$6,850,550 00

The bonded Water Debt matures as follows:—

Provided for by Sinking Fund.

Nov.	1, 1920	3½	30,000 00
July	1, 1921	3½	30,000 00
July	1, 1922	3½	13,500 00
Nov.	1, 1922	3½	5,000 00
Apr.	1, 1924	4	300,000 00
May	1, 1925	3½	46,000 00
June	1, 1928	4	20,000 00
Jan.	1, 1930	4	5,000 00
Feb.	1, 1930	3½	5,000 00
May	1, 1936	4	280,000 00
June	1, 1937	4	49,000 00
July	1, 1937	4	25,000 00
Aug.	1, 1938	4	17,000 00
May	1, 1941	3½	16,500 00
Dec.	1, 1941	3½	10,000 00
Total			$852,000 00

The bonded Water Debt matures as follows:—

Issued serially, provided for in the annual tax levy.

May	1, 1919	3½	12,500 00
July	1, 1919	4	2,000 00
July	1, 1919	4	1,500 00
Sept.	1, 1919	3½	1,500 00
Nov.	1, 1919	4	500 00
Dec.	1, 1919	3½	1,000 00
Feb.	1, 1920	4	1,500 00
Mar.	1, 1920	4	500 00
May	1, 1920	3½	12,500 00
July	1, 1920	4	2,000 00
July	1, 1920	4	1,500 00
Sept.	1, 1920	3½	1,000 00
Nov.	1, 1920	4	500 00
Dec.	1, 1920	4	1,000 00
Feb.	1, 1921	4	1,500 00
Mar.	1, 1921	4	500 00
May	1, 1921	3½	12,500 00
July	1, 1921	4	1,500 00
July	1, 1921	4	2,000 00
Sept.	1, 1921	3½	1,000 00
Nov.	1, 1921	4	500 00
Dec.	1, 1921	3½	1,000 00
Feb.	1, 1922	4	1,500 00
Mar.	1, 1922	4	500 00
May	1, 1922	3½	12,500 00
July	1, 1922	4	2,000 00
July	1, 1922	4	1,500 00
Sept.	1, 1922	3½	1,000 00
Nov.	1, 1922	4	500 00
Dec.	1, 1922	3½	1,000 00
Feb.	1, 1923	4	1,500 00
Mar.	1, 1923	4	500 00
May	1, 1923	3½	12,500 00
July	1, 1923	4	2,000 00
July	1, 1923	4	1,500 00
Sept.	1, 1923	3½	1,000 00
Nov.	1, 1923	4	2,000 00
Dec.	1, 1923	3½	1,000 00
Feb.	1, 1924	4	1,500 00
Mar.	1, 1924	4	500 00
Amount carried forward			$104,500 00

Amount brought forward				$104,500 00
May	1, 1924	3½	12,500 00	
July	1, 1924	4	2,000 00	
July	1, 1924	4	1,500 00	
Sept.	1, 1924	4	1,000 00	
Nov.	1, 1924	4	500 00	
Dec.	1, 1924	3½	1,000 00	
Feb.	1, 1925	4	1,500 00	
Mar.	1, 1925	4	500 00	
May	1, 1925	3½	12,500 00	
July	1, 1925	4	2,000 00	
July	1, 1925	4	1,500 00	
Sept.	1, 1925	3½	1,000 00	
Nov.	1, 1925	4	500 00	
Dec.	1, 1925	3½	1,000 00	
Feb.	1, 1926	4	1,500 00	
Mar	1, 1926	4	500 00	
July	1, 1926	4	2,000 00	
July	1, 1926	4	1,500 00	
Sept.	1, 1926	3½	1,000 00	
Nov.	1, 1926	4	500 00	
Dec.	1, 1926	3½	1,000 00	
Feb.	1, 1927	4½	1,500 00	
Mar.	1, 1927	4	500 00	
July	1, 1927	4	2,000 00	
July	1, 1927	4	1,500 00	
Sept.	1, 1927	4	1,000 00	
Nov.	1, 1927	4	500 00	
Dec.	1, 1927	3½	1,000 00	
Feb.	1, 1928	4	1,500 00	
Mar.	1, 1928	4	500 00	
July	1, 1928	4	2,000 00	
July	1, 1928	4	1,500 00	
Sept.	1, 1928	3½	1,000 00	
Nov.	1, 1928	3½	500 00	
Dec.	1, 1928	3½	1,000 00	
Feb.	1, 1929	4	1,500 00	
Mar.	1, 1929	4	500 00	
July	1, 1929	4	2,000 00	
July	1, 1929	4	1,500 00	
Sept.	1, 1929	3½	1,000 00	
Nov.	1, 1929	4	500 00	
Dec.	1, 1929	4	1,000 00	
Feb.	1, 1930	4	1,500 00	
Mar.	1, 1930	4	500 00	
Amount carried forward				$177,500 00

Amount brought forward				$177,500 00
JULY	1, 1930	4	2,000 00	
July	1, 1930	4	1,500 00	
Sept.	1, 1930	3½	1,000 00	
Nov.	1, 1930	4	500 00	
Dec.	1, 1930	3½	1,000 00	
Feb.	1, 1931	4	500 00	
Mar.	1, 1931	4	500 00	
JULY	1, 1931	4	2,000 00	
July	1, 1931	4	1,500 00	
Sept.	1, 1931	3	1,000 00	
Nov.	1, 1931	4	500 00	
Dec.	1, 1931	3½	1,000 00	
Feb.	1, 1932	4	500 00	
Mar.	1, 1932	4	500 00	
JULY	1, 1932	4	2,000 00	
July	1, 1932	4	1,500 00	
Sept.	1, 1932	3½	1,000 00	
Nov.	1, 1932	4	500 00	
Dec.	1, 1932	3½	1,000 00	
Feb.	1, 1933	4	500 00	
Mar.	1, 1933	4	500 00	
JULY	1, 1933	4	2,000 00	
July	1, 1933	4	1,500 00	
Sept.	1, 1933	3½	1,000 00	
Nov.	1, 1933	4	500 00	
Dec.	1, 1933	3½	1,000 00	
JULY	1, 1934	4	1,500 00	
Sept.	1, 1934	3½	1,000 00	
Dec.	1, 1934	3½	1,000 00	
JULY	1, 1935	4	1,500 00	
Sept.	1, 1935	3½	1,000 00	
Dec.	1, 1935	3½	1,000 00	
JULY	1, 1936	4	1,500 00	
Sept.	1, 1936	3½	1,000 00	
JULY	1, 1937	4	1,500 00	
Sept.	1, 1937	3½	1,000 00	
JULY	1, 1938	4	1,500 00	
JULY	1, 1939	4	1,500 00	
JULY	1, 1940	4	1,500 00	
JULY	1, 1941	4	1,500 00	
JULY	1, 1942	4	1,500 00	
JULY	1, 1943	4	1,500 00	
JULY	1, 1944	4	1,500 00	
			$227,000 00	

REPORT OF THE COMMISSIONERS OF THE SINKING FUNDS OF THE CITY OF CAMBRIDGE

To the Honorable, the City Council:

The Commissioners of the several sinking funds of the City herewith submit their annual report, covering the year ending March 31, 1920. Our report shows the condition of the sinking funds under two divisions; first, Municipal; second, Water.

The following is the condition of the Municipal Loan Funds:

Dr.

The amount of the funds March 31, 1919	$3,143,420 20
Received from City of Cambridge the annual bond requirements as appropriated for the several loans	191,697 83
Interest received on invested funds	132,111 29
Discount on bonds purchased	17,779 18
	$3,485,008 50

Cr.

Paid to City Treasurer on account of Municipal debt maturing	$135,000 00
Paid interest accrued on bonds purchased	2,691 66
Paid discount on bonds exchanged	1,885 00
Leaving amount of funds March 31, 1920	3,345,431 84
	$3,485,008 50

The following is the condition of the Water Loan Fund:

Dr.

The amount of the funds March 31, 1919	$639,307 59
Received interest on invested funds	25,315 11
Received discount on bonds purchased	1,584 85
	$666,207 55

Cr.

Paid to City Treasurer on account of Water Debt maturing	$23,000 00
Paid interest accrued on bonds purchased	658 03
Leaving amount of funds March 31, 1920	642,549 52
	$666,207 55

The following are the investments belonging to the Municipal Loan Fund:

Cambridge	City	Bonds	Sept. 1, 1920	4½	800 00
"	"	"	Nov. 1, 1920	3½	5,000 00
"	"	"	Dec. 1, 1920	4½	33,250 00
"	"	"	Mar. 1, 1921	4	300 00
"	"	"	July 1, 1921	4	20,000 00
"	"	"	July 1, 1921	3½	50,000 00
"	"	"	Sept. 1, 1921	4½	800 00
"	"	"	Nov. 1, 1921	3½	27,000 00
"	"	"	Dec. 1, 1921	4½	33,250 00
"	"	"	Mar. 1, 1922	4	300 00
"	"	"	July 1, 1922	3½	91,000 00
"	"	"	Sept. 1, 1922	4½	800 00
"	"	"	Oct. 1, 1922	3½	6,000 00
"	"	"	Nov. 1, 1922	3½	3,000 00
"	"	"	Dec. 1, 1922	4½	33,250 00
"	"	"	Mar. 1, 1923	4	300 00
"	"	"	Apr. 1, 1923	3½	7,000 00
"	"	"	Sept. 1, 1923	4½	800 00
"	"	"	Oct. 1, 1923	3½	25,000 00
"	"	"	Nov. 1, 1923	3½	12,000 00
"	"	"	Dec. 1, 1923	4½	33,250 00
"	"	"	Feb. 1, 1924	4	22,000 00
"	"	"	Mar. 1, 1924	4	300 00
"	"	"	Apr. 1, 1924	4	212,000 00
"	"	"	Apr. 1, 1924	3½	54,000 00
"	"	"	Sept. 1, 1924	3½	20,000 00
"	"	"	Sept. 1, 1924	4½	800 00
"	"	"	Nov. 1, 1924	3½	31,500 00
"	"	"	Dec. 1, 1924	4½	6,250 00
"	"	"	Mar. 1, 1925	4	300 00
"	"	"	May 1, 1925	3½	52,500 00
"	"	"	Aug. 1, 1925	3½	20,000 00
"	"	"	Oct. 1, 1925	4	7,500 00
"	"	"	Nov. 1, 1925	3½	1,500 00
"	"	"	Dec. 1, 1925	4½	6,250 00
"	"	"	Mar. 1, 1926	4	300 00
"	"	"	May 1, 1926	4	8,000 00
"	"	"	Oct. 1, 1926	4	40,000 00
"	"	"	Nov. 1, 1926	4	6,000 00
"	"	"	Dec. 1, 1926	4½	6,250 00
"	"	"	Mar. 1, 1927	4	300 00
"	"	"	Sept. 1, 1927	4	5,000 00
"	"	"	Nov. 1, 1927	4	10,000 00
"	"	"	Dec. 1, 1927	4½	6,250 00
"	"	"	Mar. 1, 1928	4	300 00
"	"	"	Dec. 1, 1928	4½	6,250 00
"	"	"	Mar. 1, 1929	4	300 00
"	"	"	Nov. 1, 1929	3½	42,000 00
"	"	"	Mar. 1, 1930	4	300 00
"	"	"	Mar. 1, 1931	4	300 00
"	"	"	Aug. 1, 1931	3½	55,000 00
"	"	"	Mar. 1, 1932	4	300 00
"	"	"	Mar. 1, 1933	4	300 00
"	"	"	Apr. 1, 1933	3½	30,000 00
"	"	"	Mar. 1, 1934	4	300 00

Cambridge City Bonds	May	1, 1934	3½	1,000 00
" " "	Mar.	1, 1935	4	300 00
" " "	Mar.	1, 1936	4	300 00
" " "	Nov.	1, 1937	4	10,000 00
" " "	Oct.	1, 1941	3½	25,000 00
" " "	Jan.	1, 1943	3½	6,000 00
Quincy City Bonds	Apr.	1, 1920	3½	1,800 00
Newton City Bonds	Apr.	1, 1920	4	14,000 00
Stoughton Town Bonds	June	1, 1920	4	2,000 00
Concord & Montreal Railroad Bonds	June	1, 1920	4	185,000 00
Waltham City Bonds	July	1, 1920	3½	4,000 00
Penobscot Shore Line Railroad Bonds	Aug.	1, 1920	4	30,000 00
Ipswich Town Bonds	Oct.	1, 1920	4	1,000 00
Newport, R. I., City Bonds	Dec.	15, 1920	4½	8,000 00
Watertown Town Bonds	Jan.	1, 1921	3½	9,000 00
Brockton City Bonds	Feb.	1, 1921	3½	5,000 00
Pittsburg, Pa., City Bonds	Apr.	1, 1921	3½	20,000 00
Quincy City Bonds	Apr.	1, 1921	3½	2,800 00
Hudson City Bonds	May	1, 1921	4	3,000 00
Peabody City Bonds	July	16, 1921	4	3,000 00
Lawrence City Bonds	Aug.	1, 1921	4	8,000 00
Troy, N. Y., City Bonds	Sept.	1, 1921	4	15,000 00
Ipswich Town Bonds	Oct.	1, 1921	4	1,000 00
Weymouth Town Bonds	Nov.	1, 1921	4	1,000 00
Portland, Ore., City Bonds	Jan.	1, 1922	5	8,000 00
Watertown Town Bonds	Jan.	1, 1922	3½	9,000 00
Brockton City Bonds	Feb.	1, 1922	3½	5,000 00
Cleveland, O., City Bonds	Feb.	1, 1922	4½	13,000 00
Quincy City Bonds	Apr.	1, 1922	3½	2,800 00
Gardner Town Bonds	June	1, 1922	4	1,250 00
Reading Town Bonds	June	1, 1922	4	5,000 00
Boston City Bonds	June	1, 1922	3½	53,000 00
Barre, Vt., City Bonds	July	1, 1922	3½	24,000 00
Gardner Town Bonds	July	1, 1922	4	2,500 00
Troy, N. Y., City Bonds	Sept.	1, 1922	4	15,000 00
Ipswich Town Bonds	Oct.	1, 1922	4	1,000 00
Weymouth Town Bonds	Nov.	1, 1922	4	5,000 00
Cleveland, O., City Bonds	Feb.	1, 1923	4½	13,000 00
New Bedford City Bonds	Feb.	1, 1923	3½	3,000 00
Minneapolis, Minn., City Bonds	Mar.	1, 1923	4½	10,000 00
Revere City Bonds	Apr.	1, 1923	3½	12,000 00
Providence, R. I., City Bonds	Apr.	1, 1923	4	10,000 00
Quincy City Bonds	Apr.	1, 1923	3½	2,800 00
Fitchburg City Bonds	May	1, 1923	4	6,000 00
Watertown Town Bonds	May	1, 1923	4	3,000 00
Gardner Town Bonds	June	1, 1923	4	1,250 00
Boston City Bonds	June	1, 1923	3½	66,000 00
Reading Town Bonds	June	1, 1923	4	5,000 00
Portland, Ore., City Bonds	July	1, 1923	5	7,000 00
Gardner Town Bonds	July	1, 1923	4	2,500 00
Medford City Bonds	July	1, 1923	4	2,000 00
Lawrence City Bonds	July	1, 1923	4	2,000 00
Medford City Bonds	Aug.	1, 1923	4	6,000 00
Jersey City, N. J., City Bonds	Sept.	1, 1923	5	50,000 00
Ipswich Town Bonds	Oct.	1, 1923	4	1,000 00
Wakefield Town Bonds	Nov.	1, 1923	3½	4,000 00
Weymouth Town Bonds	Nov.	1, 1923	4	5,000 00
Brookline Town Bonds	Jan.	1, 1924	3½	2,000 00
Cleveland, O., City Bonds	Feb.	1, 1924	4½	13,000 00

Old Colony Railroad Bonds	Feb.	1, 1924	4	7,000 00
Minneapolis, Minn., City Bonds	Mar.	1, 1924	4½	10,000 00
Revere City Bonds	Apr.	1, 1924	3½	12,000 00
Quincy City Bonds	Apr.	1, 1924	3½	2,800 00
Watertown Town Bonds	May	1, 1924	4	3,000 00
Greenwich, Conn., City Bonds	May	1, 1924	4½	2,000 00
Malden City Bonds	May	2, 1924	4	9,000 00
Gardner Town Bonds	July	1, 1924	4	2,500 00
Fall River City Bonds	July	1, 1924	3½	10,000 00
Akron, O., City Bonds	Sept.	1, 1924	5	30,000 00
Akron, O., City Bonds	Sept.	1, 1924	5½	50,000 00
Marlboro City Bonds	Sept.	1, 1924	4	10,000 00
Ipswich Town Bonds	Oct.	1, 1924	4	1,000 00
Wakefield Town Bonds	Nov.	1, 1924	3½	4,000 00
Weymouth Town Bonds	Nov.	1, 1924	4	5,000 00
Norwich, Conn., City Bonds	Jan.	1, 1925	3½	26,000 00
Cleveland, O., City Bonds	Feb.	1, 1925	4½	13,000 00
Toledo, O., City Bonds	Feb.	1, 1925	4½	40,000 00
Minneapolis, Minn., City Bonds	Mar.	1, 1925	4½	25,000 00
Revere City Bonds	Apr.	1, 1925	4	6,000 00
Winchester Town Bonds	May	1, 1925	4	6,000 00
Cranston, R. I., City Bonds	Sept.	15, 1925	4½	30,000 00
Ipswich Town Bonds	Oct.	1, 1925	4	1,000 00
Old Colony Railroad Bonds	Dec.	1, 1925	4	65,000 00
Minn. Sault Ste Marie & Atl. R.R. Bonds	Jan.	1, 1926	4	30,000 00
Cleveland, O., City Bonds	Feb.	1, 1926	4½	13,000 00
Minneapolis, Minn., City Bonds	Mar.	1, 1926	4½	5,000 00
Revere City Bonds	Apr.	1, 1926	4	6,000 00
" " "	Apr.	1, 1926	3½	2,000 00
Quincy City Bonds	May	1, 1926	4	1,000 00
Providence, R. I., City Bonds	June	1, 1926	4	5,000 00
Winchester Town Bonds	June	1, 1926	4	5,000 00
Chicago & Missouri River R.R. Bonds	July	1, 1926	5	6,000 00
Chicago & Northwestern Railroad Bonds	Aug.	15, 1926	4	50,000 00
Natick City Bonds	Oct.	1, 1926	3½	5,000 00
Ipswich Town Bonds	Oct.	1, 1926	4	1,000 00
Weymouth Town Bonds	Nov.	1, 1926	4	3,000 00
Cleveland, O., City Bonds	Dec.	1, 1926	4½	25,000 00
" " " "	Feb.	1, 1927	4½	13,000 00
Stamford, Conn., City Bonds	Feb.	1, 1927	4	5,000 00
Fitchburg Railroad Bonds	Mar.	1, 1927	4	40,000 00
Revere City Bonds	Apr.	1, 1927	4	6,000 00
Lynn City Bonds	Apr.	1, 1927	4	10,000 00
Taunton City Bonds	June	1, 1927	4	5,000 00
Arlington Town Bonds	Oct.	1, 1927	4	5,000 00
Cleveland, O., City Bonds	Dec.	1, 1927	4½	25,000 00
" " " "	Feb.	1, 1928	4½	13,000 00
Duluth, Minn., City Bonds	Apr.	1, 1928	4	5,000 00
Lake Shore & Mich. Southern R.R. Bonds	Sept.	1, 1928	4	20,000 00
Toledo, O., City Bonds	Sept.	1, 1928	4½	33,000 00
Taunton City Bonds	Dec.	1, 1928	4	3,000 00
Minneapolis, Minn., City Bonds	Jan.	1, 1929	3½	20,000 00
Cleveland, O., City Bonds	Feb.	1, 1929	4½	13,000 00
Westerly, R. I., City Bonds	Feb.	1, 1929	3½	5,000 00
American Tel. & Tel. Co. Bonds	July	1, 1929	4	65,000 00
Fall River City Bonds	Nov.	1, 1929	3½	75,000 00
Cleveland, O., City Bonds	Feb.	1, 1930	4½	13,000 00
Quincy City Bonds	Apr.	1, 1930	3½	1,000 00
West End St. Railway Bonds	July	1, 1930	4½	50,000 00
Minneapolis, Minn., City Bonds	July	1, 1930	4¼	5,000 00

Quincy City Bonds	Apr.	1, 1931	3½	1,000 00
Minneapolis, Minn., City Bonds	July	1, 1931	4¼	20,000 00
St. Paul, Minn., City Bonds	Nov.	1, 1931	4¼	50,000 00
Quincy City Bonds	Apr.	1, 1932	3½	1,000 00
Omaha, Neb., City Bonds	May	1, 1932	4½	10,000 00
Brockton City Bonds	Nov.	1, 1932	3½	10,000 00
Minneapolis, Minn., City Bonds	Jan.	1, 1933	3½	5,000 00
New Britain, Conn., City Bonds	Aug.	1, 1933	4	5,000 00
Tremont, Elkhorn & Miss. Val. R.R. Bonds	Oct.	1, 1933	6	5,000 00
Seattle, Wash., Railroad Bonds	July	1, 1934	4½	10,000 00
Augusta, Me., Water District Bonds	Aug.	1, 1934	4	10,000 00
Waterbury, Conn., City Bonds	Jan.	1, 1935	3½	10,000 00
Maine Central Railroad Bonds	Dec.	1, 1935	4½	100,000 00
5th Victory Loan U. S. Bonds	May	20, 1923	4¾	35,000 00
3rd Liberty Loan U. S. Bonds	Sept.	15, 1928	4¼	180,000 00
4th " " " " "	Oct.	15, 1928	4¼	75,000 00
1st " " " " "	June	15, 1947	3½	75,000 00

The following are the investments belonging to the Water Loan Fund:

Cambridge City Bonds	May	1, 1920	3½	12,500 00
" " "	Nov.	1, 1920	4	5,000 00
" " "	Mar.	1, 1921	4	500 00
" " "	May	1, 1921	3½	12,500 00
" " "	July	1, 1921	4	1,000 00
" " "	Mar.	1, 1922	4	500 00
" " "	May	1, 1922	3½	12,500 00
" " "	Mar.	1, 1923	4	500 00
" " "	May	1, 1923	3½	12,500 00
" " "	Feb.	1, 1924	4	38,000 00
" " "	Mar.	1, 1924	4	500 00
" " "	Apr.	1, 1924	4	1,000 00
" " "	Apr.	1, 1924	3½	23,000 00
" " "	May	1, 1924	3½	17,500 00
" " "	Mar.	1, 1925	4	500 00
" " "	Mar.	1, 1926	4	500 00
" " "	May	1, 1926	4	1,000 00
" " "	Mar.	1, 1927	4	500 00
" " "	June	1, 1927	4	1,000 00
" " "	Mar.	1, 1928	4	500 00
" " "	Mar.	1, 1929	4	500 00
" " "	Mar.	1, 1930	4	500 00
" " "	Mar.	1, 1931	4	500 00
" " "	Mar.	1, 1932	4	500 00
" " "	Mar.	1, 1933	4	500 00
" " "	Apr.	1, 1933	3½	1,000 00
" " "	Nov.	1, 1934	3½	4,000 00
" " "	Sept.	1, 1937	3½	3,000 00
Revere City Bonds	Apr.	1, 1920	3½	2,000 00
Beverly City Bonds	Apr.	1, 1920	4	4,000 00
Weymouth Town Bonds	May	1, 1920	3½	2,500 00
Holyoke City Bonds	May	1, 1920	3½	5,000 00
Minneapolis, Minn., City Bonds	June	1, 1920	4	19,000 00
Penobscot Shore Line Railroad Bonds	Aug.	1, 1920	4	25,000 00

Fitchburg Railroad Bonds	Oct.	1, 1920	3½	50,000 00
Natick Town Bonds	Oct.	1, 1921	3½	5,000 00
Lawrence City Bonds	Aug.	1, 1920	4	8,000 00
Lynn City Bonds	Jan.	1, 1922	4	10,000 00
Newport, R. I., City Bonds	Mar.	2, 1922	4½	3,000 00
Revere City Bonds	Apr.	1, 1922	3½	7,000 00
Fitchburg City Bonds	Apr.	1, 1922	4	7,000 00
Lawrence City Bonds	Aug.	1, 1922	4	4,000 00
Natick Town Bonds	Oct.	1, 1922	3½	8,000 00
Newport, R. I., City Bonds	Mar.	2, 1923	4½	3,000 00
Lynn City Bonds	Apr.	1, 1923	4	25,000 00
Quincy City Bonds	May	1, 1923	4	2,000 00
5th Victory Loan U. S. Bonds	May	20, 1923	4¼	40,000 00
Natick Town Bonds	Oct.	1, 1923	3½	7,000 00
Newton City Bonds	Jan.	1, 1924	4	2,000 00
Old Colony Railroad Bonds	Feb.	1, 1924	4	3,000 00
Quincy City Bonds	May	1, 1924	4	1,000 00
Rochester, N. Y., City Bonds	July	1, 1924	3½	35,000 00
Lewiston, Me., City Bonds	July	1, 1924	4	23,000 00
Salem City Bonds	Sept.	1, 1924	3½	3,000 00
Natick City Bonds	Oct.	1, 1924	3½	5,000 00
Central Falls, R. I., City Bonds	Dec.	1, 1924	4	5,000 00
Quincy City Bonds	May	1, 1925	4	2,000 00
Salem City Bonds	Sept.	1, 1925	3½	5,000 00
Leominster City Bonds	Oct.	1, 1925	4	29,000 00
Central Falls, R. I., City Bonds	Dec.	1, 1925	4	10,000 00
Quincy City Bonds	May	1, 1926	4	3,000 00
Burlington, Vt., City Bonds	July	1, 1926	4	10,000 00
Central Falls, R. I., City Bonds	Dec.	1, 1926	4	10,000 00
Quincy City Bonds	May	1, 1927	4	3,000 00
Attleboro Town Bonds	May	1, 1927	4	10,000 00
Quincy City Bonds	May	1, 1928	4	3,000 00
Winchester Town Bonds	June	1, 1928	4	6,000 00
3rd Liberty Loan U. S. Bonds	Sept.	15, 1928	4¼	20,000 00
Quincy City Bonds	May	1, 1929	4	3,000 00
" " "	May	1, 1930	4	3,000 00
" " "	May	1, 1931	4	3,000 00
" " "	May	1, 1932	4	1,000 00
Newton City Bonds	Aug.	1, 1935	4	2,000 00
" " "	July	1, 1936	4	11,000 00
Grafton Town Bonds	July	1, 1937	3½	1,000 00
Old Colony Railroad Bonds	Jan.	1, 1938	4	25,000 00
Grafton Town Bonds	July	1, 1938	3½	2,000 00
" " "	July	1, 1939	3½	2,000 00

MUNICIPAL FUND ACCOUNT

BOND ACCOUNT

Amount of bonds in fund March 31, 1919		$3,128,900 00
Amount of bonds purchased to March 31, 1919		350,500 00
		$3,479,400 00
Amount of bonds matured	$107,350 00	
Amount of bonds exchanged	50,000 00	
		157,350 00
Amount of bonds in fund March 31, 1920		$3,322,050 00

Cash Account

Dr.

Cash on hand March 31, 1919	$14,520 20	
Received from City of Cambridge Annual Requirements	191,697 83	
Received from interest on investments	132,111 29	
Received from matured bonds	107,350 00	
Received from bonds exchanged	50,000 00	
Received discount on bonds purchased below par	17,779 18	
	$513,458 50	

Cr.

Paid City Treasurer to redeem Municipal Debt maturing during the year	$135,000 00	
Paid for bonds purchased	350,500 00	
Paid for interest accrued	2,691 66	
Paid for discount on bonds exchanged	1,885 00	
Balance cash in Charles River Trust Co., March 31, 1920	23,381 84	$23,381 84
	$513,458 50	
Total amount of fund March 31, 1920		$3,345,431 84

WATER LOAN FUND

Bond Account

Amount of bonds in fund March 31, 1920		$637,000 00
Amount of bonds purchased to March 31, 1920		74,000 00
		$711,000 00
Amount of bonds matured to March 31, 1920		81,500 00
		$629,500 00

Cash Account

Dr.

Cash on hand, March 31, 1919	$2,307 59
Received from matured bonds	81,500 00
Received interest on investments	25,315 11
Received discount on bonds purchased below par	1,584 85
	$110,707 55

Cr.

Paid to City Treasurer to redeem Water Bonds maturing during the year	$23,000 00	
Paid interest accrued on bonds purchased	658 03	
Paid for bonds purchased	74,000 00	
Balance cash in Harvard Trust Co.	13,049 52	$13,049 52
	$110,707 55	
Total amount of fund March 31, 1920		$642,549 52

HENRY F. LEHAN,

Treasurer of Funds.

The Committee appointed to audit the accounts of the Treasurer of the funds reports that his accounts are correct and properly vouched and his books are well kept. The bonds and coupons have been examined and checked up and found correct. The interest, bond, and cash transactions of the Treasurer during the year have been carefully computed independently of his books and their correctness thereby proved.

GUSTAVUS GOEPPER,

HERBERT M. BRIDEY,

Auditing Committee.

Municipal bonds to the amount of $135,000.00 became due during the year ending March 31, 1920, and were paid from this fund. The total amount of municipal debt to be paid from the Sinking Fund now outstanding is $6,844,300.00. Deducting the present amount of the Sinking Funds at *par value,* $3,345,431.84, leaves the net amount of municipal debt chargeable to this fund March 31, 1920, $3,498,868.16. There will be due to this fund from taxation November 30, 1920, the sum of $172,205.50. During the coming financial year municipal bonds to the amount of $109,800.00 will become payable from this fund.

Water Bonds amounting to $23,000.00 became due during the year and were paid from this fund. The total amount of water debt now outstanding is $852,000.00. Deducting the present amount of the Sinking Funds at *par value,* $642,549.52, leaves the net amount of the water debt chargeable to this fund March 31, 1920, $209,450.48. During the coming year, water bonds to the amount of $30,000.00 will become payable from the fund. Owing to the large amount of surplus revenue paid to this fund in recent years, no further payments will be

required to complete the payment of the balance of the debt for which the Water Fund was created.

All municipal debt, either for municipal purposes or for water works, must now be issued serially and this board has no duty to perform in regard to any debt now incurred for any purpose.

For convenience in keeping the accounts of the funds the first Commissioners of both the Municipal and Water Funds entered all bonds purchased at par value regardless of the price paid for them and entered all interest received at the gross amount without any deduction for the proportion of premiums paid, and this practice has continued to the present time. As a result, the annual reports do not show the actual value of the funds at any time, and do not show the actual income for any year. It has been the rule of the Commissioners to charge all premiums paid to expense and all discounts to income. All bonds have been held to maturity with almost no exceptions, so that the ultimate result has been the same as if the funds were valued each year at either cost price or market value.

It has also been a rule with the Commissioners to keep the funds in their charge closely invested rather than to carry large balances on deposit in the banks. This has been possible owing to the care given by the Commissioners to so invest their funds that sufficient sums shall mature at the dates required, to pay maturing debt. That the Commissioners have been able to do so is shown by the fact that no bonds have been sold at any time to furnish funds to pay debt, as it became due.

The change of the end of the financial year from November 30 to March 31 has required that the payments to the Sinking Funds should be based upon the debt outstanding on the 30th of November, previous to the end of the present financial year, as formerly.

GEORGE G. WRIGHT,
GUSTAVUS GOEPPER,
DANIEL CRONIN,
HERBERT M. BRIDEY,
FRANCIS J. CARNEY,
GEORGE S. R. McLEAN.

REPORT OF THE FINANCE COMMITTEE

The annual report of the Committee on Finance is herewith submitted, it being for the financial year ending March 31, 1920.

Following is a summarized statement of the annual estimates as reported to the City Council at the beginning of the year:

1—General Government	$176,622 50
2—Protection to Life and Property	564,026 00
3—Health and Sanitation	121,739 56
4—Highways and Bridges	504,923 64
5—Charities	185,663 80
6—Soldiers' Benefits	39,079 00
7—Education	854,239 46
8—Libraries	36,953 00
9—Recreation	57,050 36
10—Cemeteries	36,856 56
11—City Debt Requirements	819,249 75
12—Unclassified	66,350 00
	$3,462,753 63
Estimated Revenue	867,865 00
Leaving amount to be provided for	$2,594,888 63

The Committee recommends that this amount be provided for; by assessment upon the polls and estates of the inhabitants of Cambridge, etc., for the current year, being the amount required for Municipal, School and Public Safety Departments for the year.

Orders were recommended in accordance with the foregoing estimates and the same were adopted by the City Council.

James T. Barrett, Charles H. Shea and Francis D. Coady were appointed a sub-committee to count the cash in the treasury at the close of business on March 31, 1920. They attended the duty assigned to them and reported as follows:

March 31, 1920.

To the Committee on Finance:
Gentlemen:

The sub-committee appointed to examine the cash in the hands of the City Treasurer at the close of business on March 31, 1920, would respectfully report as follows:

Actual cash and business checks in City Treasurer's office amount to		$ 9,753 70
Also certificates of deposit showing balances at the close of business to the credit of the City Treasurer.		
1. Harvard Trust Company of Cambridge		38,190 77
2. Cambridge Trust Company of Cambridge		3,029 95
3. Charles River Trust Co. of Cambridge		5,735 14
4. Central Trust Company of Cambridge		2,587 66
5. Guaranty Trust Company of Cambridge		48,768 84
6. Lechmere National Bank of Cambridge		6,398 86
7. National City Bank of Cambridge		2,165 90
8. Tremont Trust Company of Boston		73,273 76
9. Liberty Trust Company of Boston		930 29
10. Prudential Trust Company of Boston		20,434 87
11. Manufacturers' Nat'l Bank of Cambridge		23,276 50
12. Old South Trust Company of Boston		62,264 35
13. Beacon Trust Company of Boston		4,059 39
14. Roxbury Trust Company of Boston		705 40
15. Federal Trust Company of Boston		1,054 45
16. Highland Trust Company of Somerville		23,085 26
17. Hub Trust Company of Boston		2 88
Total		$325,717 97
Less Outstanding Checks	$15,275 48	
Less Interest credited after close of business	3,084 62	18,360 10
Cash on hand March 31, 1920		$307,357 87

JAMES T. BARRETT,
(Signed) CHARLES H. SHEA,
FRANCIS D. COADY.

After the above examination by your committee, March 31, 1920, additional entries belonging to the financial year ending were made as follows:

RECEIPTS

On account:		
Taxes 1919	$39,996 39	
Court Fines	672 98	
Library Fines	546 38	
Licenses	56 00	
Street Department (house offal)	92 00	
Cemetery Department	600 50	
Cemetery Department, perpetual care	270 00	
Permits	93 00	
City Clerk (fees)	115 95	
Interest on Bank Deposits	3,084 62	
Tax Collecting Department (fees)	1,500 20	
Interest on Taxes	1,164 74	
Law Department	1,000 00	
City Messenger	53 55	
Telephone Exchange	324 35	
Municipal Hospital	5 85	$49,576 51
		$356,934 38

EXPENDITURES

On account:		
Draft No. 437	$64,415 99	
Draft No. 439	17,286 23	
Draft No. 440	307 90	
Draft No. 442	3,375 17	
Draft No. 443	270 00	
Draft No. 444	22,407 10	
Draft No. 445	1 15	$108,063 54
Which deducted from the foregoing total receipts shows a balance in the City Treasurer's hands as of March 31, 1920, of		$248,870 84

The sub-committee also examined the total cash receipts and expenditures as per City Treasurer's Ledger and find the same to be as follows:

Cash balance, March 31, 1919	$ 126,864 79
Cash receipts for year ending March 31, 1920	8,204,211 48
Total cash for year ending March 31, 1920	$8,331,076 27
Total cash expenditures for year ending March 31, 1920	8,082,205 43
Which deducted from total receipts shows a cash balance as of March 31, 1920	248,870 84

The above statement of receipts and expenditures was verified by comparison with the City Auditor's statement for the year ending March 31, 1919. The sub-committee also examined the securities belonging to the Cemetery Fund and Sarah E. Russell Fund, both held in trust by the City Treasurer, and find the same to be correct.

JAMES T. BARRETT,
CHARLES H. SHEA,
FRANCIS D. COADY,
Sub-Committee on Finance.

The foregoing report was transmitted for inclusion in the general report of the Committee hereinbefore given.

JAMES T. BARRETT,
FRANK J. LEHAN,
JOHN P. GOOD,
WILLIAM M. HOGAN,
HAROLD M. BRADBURY,
FRANCIS D. COADY,
CHARLES H. SHEA,
Committee on Finance.

ANNUAL REPORT OF THE CITY AUDITOR

City Auditor's Office,

April 1, 1920.

To the Honorable, the City Council:—

The undersigned herewith presents a statement of the receipts and payments of the City of Cambridge for the year beginning on the the first day of April, 1919, and ending on the thirty-first day of March, 1920.

The first part of this report is devoted to an exhibit arranged upon the Schedules for Uniform Municipal Accounting as issued by the Bureau of Statistics by the Commonwealth of Massachusetts. Following these schedules are presented detailed statements arranged in the same order, together with the usual matters given in the Auditor's report, including a schedule of the city property.

Respectfully submitted,

CHARLES H. THURSTON,

City Auditor.

SCHEDULE A—IV.

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Revenue for Outlays	Total
GENERAL REVENUE			
1. TAXES			
Current Year:			
1. Property } 2. Poll }	$2,685,932 39		
Previous years:			
3. Property } 4. Poll }	657,839 37		
From the State:			
5. Corporation	303,147 45		
6. Street Railway (exclusive of Boston Elevated excise tax)	21,948 83		
7. Bank	20,906 67		
Income Tax	343,616 26		
Total from Taxes	$4,033,390 97		$4,033,390 97
2. LICENSES AND PERMITS			
Licenses:			
8. Liquor			
9. All Other	$12,144 86		
Permits:			
10. Marriage	1,621 00		
11. All Other	5,201 71		
Total from Licenses and Permits	$18,967 57		$18,967 57
3. FINES AND FORFEITS			
12. Court	$3,570 35		
13. Department Penalties			
14. Contract Violations	128 00		
Total from Fines and Forfeits	$3,698 35		$3,698 35
Total forward			$4,056,056 89

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Revenue for Outlays	Total
Total forward.....			$4,056,056 89
4. GRANTS AND GIFTS			
Grants from Other Civil Divisions:			
15. From State, for Education.....			
a. Support of Public Schools.....	$500 00		
b. Aid to High Schools.....			
c. Aid to Industrial Schools.....	5,395 67		
d. High School Tuition.....			
e. Union Superintendency.....			
16. From State, for Armories.....			
17. From State, for Highway Purposes			
18. From State, for Other Purposes..			
a. Inspector of Animals.....			
b. Protection against Forest Fires			
c.			
d.			
19. From County (Dog Licenses), for Schools or Libraries.....	3,170 93		
Gifts from Individuals:			
20. For Expenses.....	14,003 19		
21. For Outlays.....			
Total from Grants and Gifts.....	$23,069 79		$23,069 79
5. ALL OTHER GENERAL REVENUE			
22.			
23. Police Dept.—lost articles	$259 09		
Total from All Other General Revenue.	$259 09		$259 09
Total forward.....			$4,079,385 77

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Revenue for Outlays	Total
Total forward			$4,079,385 77
COMMERCIAL REVENUE			
6. SPECIAL ASSESSMENTS*			
24. Street Sprinkling	$2,349 61		
25. Moth Extermination	958 82		
26. Sewers			
27. Sidewalks and Curbing		$722 49	
28. Other Purposes		5,245 57	
Total from Special Assessments	$3,308 43	$5,968 06	$9,276 49
7. PRIVILEGES			
29. Public Service			
30. Minor			
Total from Privileges			
Total forward			$4,088,662 26

*Assessments appropriated for sinking fund purposes or for current expenses should be entered in the first column.

No entries to be made on this page

See State Report

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
Total forward			4,088,662.26
8. DEPARTMENTAL			
8a. General Government			
Legislative:			
31. Aldermen and Council: Moderator			
Executive:			
32. Mayor; Commission; Selectmen..			
Financial:			
33. Auditor, Accountant, and Auditing			
34. Treasurer	$3,498 07		
35. Collector			
36. Assessors			
37. License Commissioners			
38. Other Finance Offices and Accounts			
Other General Departments:			
39. Law			
40. City or Town Clerk	1,180 15		
General Government forward	$4,678 22		
Total forward			$4,088,662 26

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
1. DEPARTMENTAL			
1a. General Government			
Legislative:			
1. Aldermen and Council; Moderator			
a. Salaries and Wages	$12,559 68		
b. Other Expenses	10,059 65		
Executive:			
2. Mayor; Commission; Selectmen			
a. Salaries and Wages	9,555 00		
b. Other Expenses	4,121 10		
Financial:			
3. Auditor, Accountant, and Auditing			
a. Salaries and Wages	8,137 73		
b. Other Expenses	5,752 37		
4. Treasurer:			
a. Salaries and Wages	18,582 21		
b. Other Expenses	8,247 01		
5. Collector			
a. Salaries and Wages			
b. Other Expenses			
6. Assessors			
a. Salaries and Wages	19,576 98		
b. Other Expenses	3,596 29		
7. License Commissioners			
a. Salaries and Wages	2,934 01		
b. Other Expenses	1,088 52		
8. Other Finance Offices and Accounts			
a. Sinking Fund Commissioners	544 00		
b. Miscellaneous	1,342 50		
Other General Departments:			
9. Law			
a. Salaries and Wages	4,668 41		
b. Other Expenses	2,588 05		
10. City or Town Clerk			
a. Salaries and Wages	10,127 66		
b. Other Expenses	1,177 01		
General Government forward	$124,658 18		
Total forward			

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
Total forward			$4,088,662 26
General Government forward	$4,678 22		
41. City Messenger			
42. Public Works			
43. Engineering			
44. Superintendent of Buildings	44 00		
45. Election and Registration	21 26		
46. Other General Departments			
Municipal Buildings			
47. City or Town Hall	99 48		
Total from General Government	$4,842 96		$4,842 96
8b. Protection of Persons and Property			
Police Department			
48. Services of Officers	$1,138 45		
49. Sale of Materials	492 57		
50. Miscellaneous	2 20		
Protection of Persons and Property forward	$1,633 22		
Total forward			$4,093,505 22

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
Total forward.....			
General Government forward.....	$124,658 18		
11. City Messenger			
a. Salaries and Wages.....	$2,528 39		
b. Other Expenses.....	439 62		
12. Public Works			
a. Salaries and Wages.....			
b. Other Expenses.....			
13. Engineering			
a. Salaries and Wages.....	6,239 55		
b. Other Expenses.....	857 60		
14. Superintendent of Buildings			
a. Salaries and Wages.....	3,661 00		
b. Other Expenses.....	1,170 98		
15. Election and Registration			
a. Salaries and Wages.....	11,695 33		
b. Other Expenses.....	6,700 38		
16. Other General Departments	421 91		
a. Planning Board.....	1,177 11		
Municipal Buildings			
17. City or Town Hall			
a. Salaries and Wages.....	17,312 30		
*b. Other Expenses.....	14,664 03	$2,400 00	
Total for General Government.....	$191,526 38	$2,400 00	$193,926 38
1b. Protection of Persons and Property			
Police Department			
18. Salaries and Wages.....	$280,510 88		
19. Horses and Care of Same.....			
*20. Equipment and Repairs.....	2,611 06	$1,882 62	
21. Fuel and Light.....	1,164 55		
22. Maintenance of Buildings and Grounds.....	636 69		
*23. New Buildings.....			
24. Other Expenses.....	2,431 54		
Protection of Persons and Property forward.....	$287,354 72	$1,882 62	
Total forward.....			$193,926 38

*Entries for construction or new equipment should be made in the second column.

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
Total forward			$4,093,505 22
Protection of Persons and Property forward	$1,633 22		
Fire Department			
51. Sale of Materials	762 69		
52. Miscellaneous			
Militia			
53. Armories			
54. Rifle Ranges			
Inspection			
55. Inspection of Buildings			
56. Inspection of Wires			
57. Sealing of Weights and Measures	633 55		
Forestry			
58. Insect Pest Extermination	17 50		
59. Planting and Trimming Trees	81 72		
60. Forest Fires			
Other Protection of Persons and Property			
61. Bounties			
62. Fire Alarm, Police Telegraph and Inspection of Wires	151 52		
63.			
Total from Protection of Persons and Property	$3,280 20		$3,280 20
Total forward			$4,096,785 42

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
Total forward			$193,926 38
Protection of Persons and Property forward	$287,354 72	$1,882 62	
Fire Department			
25. Salaries and Wages	228,223 09		
26. Horses and Care of Same	8,958 09		
*27. Equipment and Repairs	3,206 10	19,082 70	
28. Hydrant Service			
29. Fuel and Light	6,704 38		
30. Maintenance of Buildings and Grounds	4,687 00		
*31. New Buildings			
32. Other Expenses	607 75		
Militia			
33. Armories			
34. Rifle Ranges			
Inspection			
35. Inspection of Buildings	5,129 60		
36. Inspection of Wires	5,983 65		
37. Sealing of Weights and Measures	8,065 64		
Forestry			
38. Insect Pest Extermination	2,481 27		
39. Planting and Trimming Trees	8,157 07		
40. Forest Fires			
Other Protection of Persons and Property			
41. Bounties			
42. Game Warden	50 00		
43. Fire Alarm, Police Telegraph and Inspection of Wires	24,255 79		
44. Fire Prevention Acts, 1914	1,918 61		
Total for Protection of Persons and Property	$595,782 76	$20,965 32	$616,748 08
Total forward			$810,674 46

*Entries for construction or new equipment should be made in the second column.

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
Total forward			$4,096,785 42
8c. Health and Sanitation			
Health			
64. Quarantine and Contagious Disease Hospitals	$2,445 42		
65. Tuberculosis	17,877 44		
66. Miscellaneous			
67. Inspection			
Sanitation			
68. Sewers and Sewage Disposal	236 18		
69. Sewer Construction			
70. Refuse and Garbage Disposal	24,555 00		
71. Street Cleaning			
Other Health and Sanitation			
72.			
73.			
Total from Health and Sanitation	$45,114 04		$45,114 04
Total forward			$4,141,899 46

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
Total forward			$810,674 46
1c. Health and Sanitation			
Health			
45. General Administration	$12,314 59		
*46. Quarantine and Contagious Disease Hospitals	15,543 53		
*47. Tuberculosis	57,188 82		
48. Vital Statistics	839 33		
49. Other Expenses	7,963 20		
a. Abatement Smoke Nuisance	587 69		
50. Inspection			
a. Inspection of School Children	10,462 74		
b. Inspection of Animals	2,428 43		
c. Inspection of Meat and Provisions	3,090 32		
d. Inspection of Milk and Vinegar	3,947 90		
Sanitation			
51. Sewer Maintenance and Operation	15,929 92		
52. Metropolitan Sewer Maintenance	46,484 38		
*53. Sewer Construction		64,992 10	
*54. Refuse and Garbage Disposal	175,698 31	359 19	
*55. Street Cleaning	74,435 30		
Other Health and Sanitation			
*56. Sanitaries and Public Convenience Stations			
57. Care of Brooks and Streams			
58. Draining of Ponds			
59. Suppression Flies and Mosquitoes	4,226 93		
Total for Health and Sanitation	$431,141 39	$65,351 29	$496,492 68
Total forward			$1,307,167 14

*Entries for construction or new equipment should be made in the second column.

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
Total forward			$4,141,899 46
8d. Highways			
74. General	$2,858 83		
75. Construction		$11,929 49	
76. Sidewalks and Curbing	2,097 50		
77. Snow and Ice Removal			
78. Sprinkling			
a. Water			
b. Other	103 84		
79. Lighting			
80. Miscellaneous			
Total from Highways	$5,060 17	$11,929 49	$16,989 66
8e. Charities			
81. Almshouse or Town Farm			
a. Sale of Produce and Stock	$1,094 85		
b. Board	2,062 46		
c. Miscellaneous	32 74		
82. Reimbursements for Relief Given			
a. From Individuals	433 00		
b. From Other Cities and Towns	2,374 29		
c. From the State	3,526 50		
83. Reimbursements for Mothers' Aid			
a. From Individuals			
b. From Other Cities and Towns	19,974 97		
c. From the State	1,270 14		
84. Municipal General Hospitals	17,154 90		
85. Miscellaneous			
Total from Charities	$47,923 85		$47,923 85
Total forward			$4,206,812 97

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
Total forward			$1,307,167 14
1d. Highways			
60. General Administration	$8,430 82		
61. General Highway Expenditures	177,491 65	$1,087 60	
*62. Construction		347,116 29	
*63. Sidewalks and Curbing	3,919 79	27,422 40	
64. Snow and Ice Removal	27,428 02		
*65. Sprinkling			
a. Water	9,125 72		
b. Other	12,017 17		
66. Lighting	77,765 86		
67. Other Expenses			
a. Town Pump			
b. Signs, Guide Boards, and Street Numbering	802 28		
c.			
Total for Highways	$316,981 31	$375,626 29	$692,607 60
1e. Charities			
68. General Administration	$10,034 42		
*69. Almshouse or Town Farm	38,898 05		
70. Outside Relief by City or Town	59,912 71		
71. Relief given by Other Cities and Towns	4,266 95		
72. Mothers' Aid			
a. Relief given by City or Town.	55,643 05		
b. Relief given by Other Cities and Towns	3,835 67		
73. Hospitals			
*a. Municipal General	62,009 82	$59 90	
b. Private or Quasi-public			
74. Other Expenses			
Total for Charities	$234,600 67	$59 90	$234,660 57
Total forward			$2,234,435 31

*Entries for construction or new equipment should be made in the second column

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
Total forward			$4,206,812 97
8f. Soldiers' Benefits			
86. State Aid	$103,145 41		
87. Military Aid	317 50		
88. Soldiers' Burials	100 00		
89. Soldiers' Relief			
Total from Soldiers' Benefits	$103,562 91		$103,562 91
8g. Schools			
90. Tuition and Transportation of State Wards	$1,522 50		
91. Other Tuition	4,726 25		
92. Sale of Text Books and Supplies	139 73		
93. Miscellaneous	701 50		
a. Sales Food at High School Lunch	10,114 46		
b. Sales Food at Fresh Air School	89 04		
c. Sales at Trade School	114 58		
Total from Schools	$17,408 06		$17,408 06
8h. Libraries			
94. Fines, Rentals, and Sales	$1,532 10		
95. Miscellaneous			
Total from Libraries	$1,532 10		$1,532 10
Total forward			$4,329,316 04

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
Total forward			$2,234,435 31
1f. Soldiers' Benefits			
75. General Administration	$6,559 51		
76. State Aid	24,140 48		
77. Military Aid	3,305 00		
78. Soldiers' Burials	150 00		
79. Soldiers' Relief	31,273 39		
Total for Soldiers' Benefits	$65,428 38		$65,428 38
1g. Schools			
80. General Expenses			
Smith Hughes Fund	$604 23		
a. Administrative Salaries	8,237 78		
b. Other General Salaries	20,844 30		
c. Other General Expenses	9,297 34		
81. Teachers' Salaries	710,812 97		
82. Text Books and Supplies	60,451 33		
83. Tuition	383 40		
84. Transportation	449 00		
85. Support of Truants	63 15		
86. Janitors' Services	66,604 29		
87. Fuel and Light	33,993 87		
88. Maintenance of Buildings and Grounds	18,550 69		
*89. New Buildings		$39,480 69	
*90. Furniture and Furnishings	416 77		
91. Rent			
92. Other Expenses	2,931 13		
Total for Schools	$933,640 25	$39,480 69	$973,120 94
1h. Libraries			
93. Salaries and Wages	$27,000 74		
94. Books, Periodicals, etc.	7,057 01		
95. Binding	2,060 10		
96. Fuel and Light	2,459 73		
*97. Buildings	1,603 68		
98. Other Expenses	2,128 14	$825 00	
Total for Libraries	$42,309 40	$825 00	$43,134 40
Total forward			$3,316,119 03

*Entries for construction or new equipment should be made in the second column.

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
Total forward.....			$4,329,316 04
8i. Recreation			
96. Parks and Gardens.....	$673 00		
97. Playgrounds and Gymnasia.....	1,428 55		
98. Bathhouses and Beaches.....	1,585 94		
99. Celebrations and Entertainments			
Total from Recreation.....	$3,687 49		$3,687 49
Total forward.....			$4,333,003 53

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
Total forward			$3,316,119 03
1i. Recreation			
99. General Administration			
a. Salaries and Wages	$3,612 00		
b. Other Expenses	1,725 83		
100. Parks and Gardens			
a. Salaries and Wages	33,165 42		
*b. Improvements and Additions.			
c. Metropolitan Park Maintenance	60,943 03		
d. Other Expenses	15,363 90		
101. Playgrounds and Gymnasia			
a. Salaries and Wages	5,201 42		
*b. Improvements and Additions.		$4,990 30	
c. Other Expenses	1,658 90		
102. Bathhouses and Beaches			
a. Salaries and Wages	6,274 25		
*b. Improvements and Additions.		2,415 08	
c. Other Expenses	3,421 26		
103. Celebrations and Entertainments			
a. Fourth of July	2,065 43		
b. Labor Day	308 42		
c. Band Concerts			
d. All Other Sundry Celebrations	181 08		
Welcome to Returning Soldiers and Sailors	14,607 85		
Total for Recreation	$148,528 79	$7,405 38	$155,934 17
Total forward			$3,472,053 20

*Entries for construction or new equipment should be made in the second column.

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
Total forward			$4,333,003 53
8j. Pensions			
100.			
Total from Pensions			
8k. Unclassified			
101. Receipts not Recorded under Previous Classifications			
a. Sale of Land	$25,400 00		
b. Rent Land, Harvard College	2,400 00		
c. Excess Receipts, Federal Food	628 91		
d.			
Total from Unclassified	$28,428 91		$28,428 91
Total forward			$4,361,432 44

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
Total forward			$3,472,053 20
1j. Pensions			
104. Retirement made from:			
a. Clerk of Committees Dept.	$450 00		
b. Registrars of Voters Dept.	494 00		
c. Inspection of Buildings Dept.	1,135 00		
d. Police Dept.	9,898 40		
e. Fire Dept.	24,784 95		
f. Health Dept.	600 00		
g. Sewer Dept.	2,382 33		
h. House Offal Dept.	1,857 64		
i. Boston and Cambridge Bridges Dept.	250 00		
j. Street Dept.	10,514 51		
k. School Teachers Dept.	8,950 00		
l. School Agent and Janitors Dept.	3,756 00		
m. Soldiers' Benefits Dept.	350 00		
n. Park Dept.	1,019 77		
o. Cemetery Dept.	1,093 56		
p. Water Dept.	3,157 16		
Total for Pensions	$70,693 32		$70,693 32
1k. Unclassified			
105. Damages to Persons and Personal Property	$9,751 37		
106. Memorial Day	1,400 00		
107. City and Town Clocks (from Bldg. Dept.)	117 00		
108. Searching Parties			
109. Ice for Drinking Fountains (from Water Dept.)	1,086 17		
110. Payments not Recorded under Previous Classifications			
a. Printing City or Town Reports			
b. Postage and Stationery	60 26		
c. Workingmen's Compensation	500 00		
d. Boston Elevated Railway Co. Assessment and Interest	392,185 34		
e. All Other	7,982 05		
Total for Unclassified	$413,082 19		$413,082 19
Total forward			$3,955,828 71

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Offsets to Outlays	Total
Total forward			$4,361,432 44
9. PUBLIC SERVICE ENTERPRISES			
102. Electric			
a. Income from Sale of Light and Power			
b. Miscellaneous			
103. Gas			
a. Income from Sale of Gas			
b. Sale of By-products (coke, tar, etc.)			
c. Miscellaneous			
104. Water			
a Income from Sale of Water	$403,249 34		
b. Miscellaneous	18,056 45	$2,115 26	
105. All Other			
a. Markets			
b. Public Scales	40 00		
c. Docks and Wharves			
d. Ferries			
e. Herring and Alewife Fisheries			
f. Miscellaneous			
Total from Public Service Enterprises	$421,345 79	$2,115 26	$423,461 05
10. CEMETERIES			
106. Sale of Lots and Graves	$14,195 69		
107. Care of Lots and Graves	12,888 67		
108. Care of Endowed Lots (Interest on Funds)	6,543 90		
109. Miscellaneous			
Total from Cemeteries	$33,628 26		$33,628 26
11. ADMINISTRATION OF TRUST FUNDS			
110.			
111.			
112.			
Total from Administration of Trust Funds			
Total forward			$4,818,521 75

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	Expenses	Outlays	Total
Total forward			$3,955,828 71
2. PUBLIC SERVICE ENTERPRISES			
111. Electric			
a. Maintenance and Operation			
*b. Construction			
112. Gas			
a. Maintenance and Operation			
*b. Construction			
113. Water			
a. Maintenance and Operation	$285,378 13		
b. Metropolitan Water Maintenance			
*c. Construction		$461 26	
114. All Other			
a. Markets	1,678 06		
b. Public Scales			
c. Docks and Wharves			
d. Ferries			
e. Herring and Alewife Fisheries			
f. Miscellaneous			
Total for Public Service Enterprises	$287,056 19	$461 26	$287,517 45
3. CEMETERIES			
115. Maintenance	$42,355 45		
*116. Improvements and Additions			
Total for Cemeteries	$42,355 45		$42,355 45
4. ADMINISTRATION OF TRUST FUNDS			
117.			
118.			
119.			
Total for Administration of Trust Funds			
Total forward			$4,285,701 61

*Entries for construction or new equipment should be made in the second column.

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS	Revenue for Expenses	Indebtedness	Total
Total forward			$4,818,521 75
12. INTEREST			
113. On Deposits	$13,819 29		
114. On Deferred Taxes	51,819 42		
115. On Deferred Special Assessments	249 95		
116. On Sinking Funds			
117. On Investment Funds			
118. On Public Trust Funds*			
a. Charity			
b. School			
c. Library			
d. Cemetery (for General Care)			
e. All Other			
119. Miscellaneous			
Total from Interest	$65,888 66		$65,888 66
13. MUNICIPAL INDEBTEDNESS			
120. Loans in Anticipation of Revenue		$70,000 00	
121. Other Temporary Loans		2,000,000 00	
122. Loans for General Purposes		506,250 00	
123. Trust Funds Used			
124. Loans for Public Service Enterprises			
125. Loans for Cemeteries			
126. Bonds Refunded, Current Year			
127. Premiums		$6,731 74	
128. Unpaid Warrants or Orders of Current Year			
Total from Municipal Indebtedness		$2,582,981 74	$2,582,981 74
Total forward			$7,467,392 15

*Including income of funds invested in real estate.

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	Expenses	Indebtedness	Total
Total forward			$4,285,701 61
5. INTEREST			
120. On Loans in Anticipation of Revenue			
121. On Other Temporary Loans	$60,784 68		
122. On Loans for General Purposes	328,768 63		
123. On Trust Funds Used	1,661 10		
124. On Loans for Public Service Enterprises	43,993 75		
125. On Loans for Cemeteries	280 00		
126. Metropolitan Interest Requirements			
a. Sewer	52,982 55		
b. Park	50,179 89		
c. Water			
127. State Assessment for Interest on Account of Abolition of Grade Crossings			
128. All Other			
Total for Interest	$538,650 60		$538,650 60
6. MUNICIPAL INDEBTEDNESS			
129. Loans in Anticipation of Revenue		$2,050,000 00	
130. Other Temporary Loans			
131. Bonds and Notes from Sinking Funds			
a. General		144,000 00	
b. Public Service Enterprises		23,000 00	
c. Cemeteries			
132. Bonds and Notes from Revenue			
a. General	$201,200 00		
b. Public Service Enterprises	20,500 00		
c. Cemeteries			
133. Metropolitan Sinking Fund and Serial Loan Requirements			
a. Sewer	33,963 34		
b. Park	11,844 46		
c. Water			
134. State Assessment for Abolition of Grade Crossings Loan Fund			
135. Bonds Refunded, Current Year			
136. Warrants or Orders of Previous Years			
Total for Municipal Indebtedness	$267,507 80	$2,217,000 00	$2,484,507 80
Total forward			$7,308,860 01

Schedule A-IV—Continued

RECEIPTS

SOURCES OF RECEIPTS		Non-Revenue	Total
Total forward			$7,467,392 15
14. SINKING FUNDS			
From Commissioners to meet Loans for —			
129. General Purposes		$117,000 00	
130. Public Service Enterprises		41,000 00	
131. Cemeteries			
Total from Sinking Funds		$158,000 00	$158,000 00
		Temporary Accounts	
15. AGENCY, TRUST, AND INVESTMENT TRANSACTIONS			
Agency			
132. Taxes			
a. State, Including Soldiers' Exemption Tax		$336,236 54	
b. Non-resident Bank		4,450 80	
c. County		162,646 36	
133. Liquor Licenses Collected for the State			
134. Reimbursements for Abolition of Grade Crossings			
135. All Other			
Trust			
136. Perpetual Care Funds		3,360 25	
137. Other Permanent Public Trust Funds			
138. Income for Investment			
139. Private Trust Funds and Accounts		4,840 35	
Investment			
140. Sinking Fund Securities			
141. Investment Fund Securities			
Total from Agency, Trust, and Investment Transactions		$511,534 30	$511,534 30
Total forward			$8,136,926 45

Schedule A-IV—Continued

PAYMENTS

OBJECTS OF PAYMENTS	From Revenue	From Non-Revenue	Total
Total forward			$7,308,860 01
7. SINKING FUNDS			
To Commissioners for Debt Requirements			
137. From Taxes, Earnings, etc.	$191,189 16		
138. From Special Assessments			
139. From Sale of Real Estate, etc.			
Total for Sinking Funds	$191,189 16		$191,189 16
		Temporary Accounts	
8. AGENCY, TRUST, AND INVESTMENT TRANSACTIONS			
Agency			
140. Taxes			
a. State (Including Soldiers' Exemption)		$336,236 54	
b. Non-resident Bank		4,450 80	
c. County		162,646 36	
141. Liquor Licenses Remitted to the State			
142. Abolition of Grade Crossings			
143. All Other			
Trust			
144. Perpetual Care Funds		3,360 25	
145. Other Permanent Public Trust Funds			
146. Income Invested			
147. Private Trust Funds and Accounts		8,177 28	
Investment			
148. Sinking Fund Securities			
149. Investment Fund Securities			
Total for Agency, Trust, and Investment Transactions		$514,871 23	$514,871 23
Total forward			$8,014,920 40

Schedule A-IV—Concluded

RECEIPTS

SOURCES OF RECEIPTS		Temporary Accounts and Cash Balances	Total
Total forward			$8,136,926 45
16. REFUNDS			
142. Taxes		$6,597 25	
143. Licenses		6 00	
144. Special Assessments		42 01	
145. General Departments		259 08	
146. Public Service Enterprises		1,170 38	
147. Cemeteries		299 41	
148. Accrued Interest		630 00	
149. All Other		111 07	
Total Refunds		$9,115 20	$9,115 20
17. TRANSFERS			
150. Departmental			
a. Law from Water Dept.		$1,000 00	
b. Treasury from Water Dept.		1,500 00	
c.			
Total Transfers		$2,500 00	$2,500 00
BALANCES			
151. General			
152. Sinking Fund			
153. Investment Fund			
154. Perpetual Care Fund			
155. Other Public Trust Fund			
156. PrivateTrust Funds and Accounts			
Total Cash on Hand Beginning of Year		$126,864.79	$126,864 79
Grand Total Receipts and Cash on Hand			$8,275,406 44

Schedule A-IV—Concluded

PAYMENTS

OBJECTS OF PAYMENTS		Temporary Accounts and Cash Balances	Total
Total forward			$8,014,920 40
9. REFUNDS			
150. Taxes		$6,597 25	
151. Licenses		6 00	
152. Special Assessments		42 01	
153. General Departments		259 08	
154. Public Service Enterprises		1,170 38	
155. Cemeteries		299 41	
156. Accrued Interest		630 00	
157. All Other		111 07	
Total Refunds		$9,115 20	$9,115 20
10. TRANSFERS			
158. Departmental			
a. Water to Law		$1,000 00	
b. Water to Treasury		1,500 00	
c.			
Total Transfers		$2,500 00	$2,500 00
11. BALANCES			
159. General			
160. Sinking Fund			
161. Investment Fund			
162. Perpetual Care Fund			
163. Other Public Trust Fund			
164. Private Trust Funds and Accounts			
Total Cash on Hand End of Year			$248,870 84
Grand Total Payments and Cash on Hand			$8,275,406 44

Schedule A-V

APPROPRIATIONS, RECEIPTS AND PAYMENTS

CITY INCOME

Departmental:

General Government.
Protection of Life and Property.
Health and Sanitation.
Highways and Bridges.
Charities.
Soldiers' Benefits.
Education.
Libraries.
Recreation.
Unclassified.

Public Service Enterprises:

Water Works.
Cemeteries.

Administration of Invested Funds

Interest.

Sinking Fund.

Abatements, Taxes.

CITY INCOME

Statement in Detail of All Income, Taxes and Loans Received on Account of the City of Cambridge During the Financial Year 1919–1920

TAXES

Taxes of 1919		$3,194,234 03	
Taxes of 1918		469,302 87	
Taxes of 1917		181,386 47	
Taxes of 1916		7,821 50	
Taxes of 1915		945 70	
Taxes of 1914		6 14	
Taxes of 1913		2 00	
Taxes of 1912		2 00	
Taxes of 1911		2 00	
			$3,853,702 71
From Commonwealth, for city's proportion of tax on corporations			303,147 45
From Commonwealth, for city's proportion of tax on banks			20,906 67
From Commonwealth, for city's proportion of Income Tax			343,616 26
Street Railway Tax			21,948 83

LICENSES AND PERMITS

Building permits		$3,757 25	
Dance and amusement licenses		1,506 01	
Elevator licenses		52 00	
Electrical permits		1,416 46	
Fireworks (issued by Fire Chief)		50	
Gasoline (issued by Fire Chief)		293 50	
Hawkers and peddlers (State)		50 00	
Manicure, etc.		51 00	
Milk and vinegar		336 00	
Oleo		39 50	
Sealer of Weights and Measures (State)		50 00	
Street permits		28 00	
Licenses issued by Commissioner and City Clerk:			
Auctioneers'	$34 00		
Badges	36 00		
Detective	10 00		
Firearms	6 00		
Fireworks	22 50		
Furniture and second-hand stores	200 00		
Gasoline and garage	377 50		
Inflammable fluid	140 00		
Intelligence office	54 00		
Junk stores and collectors	1,500 00		
Lord's Day	560 00		
Marriages	1,621 00		
Pawnbroker	100 00		
Peddlers	790 00		
Police minor licenses	8 20		
Pool and private bowling alleys	133 00		
Amount carried forward	$5,592 20	$7,580 22	$4,543,321 92

LICENSES AND PERMITS—Concluded

Amount brought forward	$5,592 20	$7,580 22	$4,543,321 92
Public market	3,284 60		
Second-hand automobiles	1,725 00		
Slaughtering	3 00		
Victuallers	568 00		
Wagon, carriage and drivers	186 50		
Miscellaneous	36 25		
		11,395 55	
			18,975 77

COURT FINES

Fines from Third District Court	$3,452 35	
Fines from House of Correction	118 00	
		3,570 35

DOG LICENSE FROM COUNTY

From County for Libraries	3,170 93

STREET SPRINKLING ASSESSMENTS

Street sprinkling, 1917	$2,246 25	
Street sprinkling, 1916	88 84	
Street sprinkling, 1915	16 88	
		2,351 97

MOTH EXTERMINATION ASSESSMENTS

Moth assessments, 1919	$797 96	
Moth assessments, 1918	90 05	
Moth assessments, 1917	65 82	
Moth assessments, 1916	4 96	
Moth assessments, 1915	1 24	
		959 13

LAW DEPARTMENT

Legal advice and services of City Solicitor to Water Department	1,000 00

CITY CLERK'S DEPARTMENT

Mortgages, assignments, etc.	$614 95	
Certificates from records	285 75	
Dog licenses	237 40	
Married women's certificates	2 25	
Business certificates	27 50	
Cemetery deed	7 25	
Physicians	2 00	
Witness fees	2 80	
Lost and found	25	
		1,180 15
Amount carried forward		$4,574,530 22

TREASURER'S DEPARTMENT

Amount brought forward			$4,574,530 22
For sale:			
Preparation		$121 00	
Advertising		271 74	
Deeds		277 00	
Recording		52 65	
Posting		120 00	
Releases		63 00	
Certificates of liens		558 00	
Affidavits		65 00	
Demand		35 50	
Examination of title		35 00	
Statutory fee		13 00	
Taxes—Summonses		1,964 00	
Services of department in collection of Water rates, etc.		1,500 00	
			5,075 89

POSTAGE AND STATIONERY

For stationery furnished to:			
Water department			177 78

ELECTION EXPENSES—CITY CLERK'S DEPARTMENT

Sale of old paper			21 26

MUNICIPAL BUILDINGS

Sale of:			
Ordinances	$65 50		
Junk, etc.	33 98		
		$99 48	
For taking down old building		44 00	
			143 48

FIRE DEPARTMENT

Sale of horses		$293 00	
Tractor		400 00	
Junk, etc.		69 69	
			762 69

POLICE DEPARTMENT

For services of officers		$1,138 45	
For sale of:			
Cloth	$459 52		
Harness	20 00		
Lost articles	259 09		
Old paper	13 05		
		$751 66	
			1,890 11

SEALER OF WEIGHTS AND MEASURES

Fees for sealing		$633 55	
Weighing fee at public scales		40 00	
			673 55
Amount carried forward			$4,583,274 98

ELECTRICAL DEPARTMENT

Amount brought forward			$4,583,274 98
Sale of:			
Pedestal		$75 00	
Whistle		75 00	
Old paper		1 52	
			151 52

MOTH EXTERMINATION BILLS

Sundry Persons			17 50

FORESTRY

Removal of trees			81 72

HEALTH DEPARTMENT

For board at Tuberculosis Hospital:			
Sundry persons	$1,315 10		
Other cities and towns	13,963 07		
Commonwealth	2,599 27		
		17,877 44	
Other contagious diseases:			
Sundry persons	$1,178 10		
Other cities and towns	297 25		
Commonwealth	970 07		
		2,445 42	
			20,322 86

MUNICIPAL HOSPITAL

For board from sundry individuals		$17,086 90	
Sundry supplies		50 00	
Telephone		18 00	
			17,154 90

SEWER MAINTENANCE

Fee for connecting with sewer		$50 00	
Sale of cement, etc.	$59 08		
Sale of horse, cart, etc.	61 00		
		120 08	
Use of pump		7 50	
Cleaning and repairs		53 60	
Use of horse		5 00	
			236 18

HOUSE OFFAL

For sale of offal			24,555 00

INCINERATOR

For rent of incinerator			250 00
Amount carried forward			$4,646,044 66

STREET MAINTENANCE

Amount brought forward		$4,646,044 66
For rent of track	$750 00	
Use of signboard	140 00	
Manure	254 69	
Repairing streets	766 14	
Cement, sand, etc.	50 03	
Junk, etc.	75 04	
Use of steam roller	60 00	
Return on cement bags	40 00	
Granite blocks, bricks, etc.	469 38	
Gasoline	1 30	
Damage	2 25	
		2,608 83

STREET SPRINKLING

For sprinkling private ways	103 84

SIDEWALKS AND DRIVEWAYS

For constructing driveways, etc.	2,097 50

CITY HOME

For board:		
Sundry persons	$2,043 97	
Cities and towns	18 49	
Sale of bones, grease, etc.	19 40	
Sale of produce	1,094 85	
Miscellaneous	13 34	
		3,190 04

OUTSIDE AID

For reimbursements:		
From individuals	$433 00	
From cities and towns	2,374 29	
From Commonwealth of Massachusetts	3,526 50	
Mothers' Aid from Commonwealth of Massachusetts	19,974 97	
Mothers' Aid from cities and towns	1,270 14	
		27,578 90

SOLDIERS' BENEFITS

From Commonwealth of Massachusetts:		
State Aid	$103,145 41	
Military Aid	317 50	
Burials	100 00	
		103,562 91

SCHOOL DEPARTMENT

From State for vision class	$500 00	
Vocational Schools	5,395 67	
Minor wards	1,522 50	
Tuition of minor wards, City of Boston	330 75	
Amount carried forward	$7,748 92	$4,785,186 69

SCHOOL DEARTMENT

Amount brought forward		$7,748 92	$4,785,186 69
Tuition of non-resident pupils:			
At High Schools	$328 00		
Rindge Technical School	495 00		
Rindge Evening Industrial	302 50		
Agassiz School	30 00		
Vision class	30 00		
From Hopkins Fund	160 00		
		1,345 50	
Damages collected		37 56	
Deposits forfeited		128 00	
Sales of Trade School		114 58	
Sales of food at High School lunch		10,114 46	
Sales of food at Fresh Air School		89 04	
Sales of soap and towels at Thorndike School Baths		152 38	
Sales of soap and towels at Haggerty School Baths		24 87	
Use of halls for rallies, etc.		483 50	
Use of Rindge School for Harvard Engineering Class		3,050 00	
Text books and supplies		102 17	
Refund on fuel bill		65 21	
Refund on insurance		41 05	
Sale of minor licenses		40 75	
			23,537 99

LIBRARIES

Fines, rentals, etc.			1,532 10

PARK DEPARTMENT—RENTS, ETC.

For use of Russell Field		1,295 00	
For rent of Weld Boathouse		500 00	
For land outside of Russell Field, etc.		76 00	
For maintenance Cambridge Common, from Navy		13,123 00	
Use of towels:			
Rindge Field	$101 45		
Cambridge Field	107 10		
Magazine Beach	1,585 94		
		1,794 49	
Miscellaneous:			
Damage	$64 00		
Sundries	33 00		
		97 00	
			16,885 49

TELEPHONE EXCHANGE

Receipts from the Water Department			324 35

FEDERAL FOOD

Excess of receipts on account of Federal Food			628 91
Amount carried forward			$4,828,095 53

WATER DEPARTMENT

Amount brought forward			$4,828,095 53
Meter rates		$283,138 74	
Annual rates		121,280 98	
Miscellaneous bills:			
Off and on	$129 00		
Supply	11,643 46		
Seals	30 00		
Rent	630 90		
Maintenance	5,592 09		
Maintenance Building	31 00		
		18,056 45	
			422,476 17

CEMETERY DEPARTMENT

For sale of lots and graves	$14,495 10	
Burials, care, etc.	12,888 67	
Interest on Perpetual Care Fund	6,543 90	
Perpetual Care	3,360 25	
		37,287 92

INTEREST

On Deposits	$13,819 29	
Taxes	51,930 49	
Special assessments	177 40	
Committed interest	72 55	
Accrued interest	30 00	
Overseers of the Poor loan	600 00	
		66,629 73

SALE OF PUBLIC LAND

Sale of land on Blackstone Street	25,400 00

RENT OF LAND—HARVARD COLLEGE

In lieu of taxes	2,400 00

SMITH HUGHES FUND

From the State to the School Department	880 19

SPECIAL RECEIPTS

SEWER ASSESSMENTS

Unapportioned assessments	$549 35	
Apportioned assessments, 1919	49 63	
Apportioned assessments, 1918	8 64	
Apportioned assessments, 1920, 21, 22, 23	114 87	
		722 49
Amount carried forward		$5,383,892 03

EDGESTONES AND SIDEWALKS

Amount brought forward		$5,383,892 03
For sidewalk assessments:		
Unapportioned	$4,855 05	
Apportioned, 1919	251 25	
" 1918	54 22	
" 1917	50 33	
" 1916	52 10	
" 1915	21 96	
		5,284 91

HARVARD BRIDGE

Construction	11,929 49

WATER DEPARTMENT—DETECTOR METERS

For labor and material	2,115 26

PREMIUM ACCOUNT

For premium on Municipal Bonds	6,731 74

RECEIPTS FROM LOANS

Street	$288,750 00	
Hospital	150,000 00	
Sewer Construction	52,500 00	
School house	15,000 00	
		506,250 00

TEMPORARY LOANS

In anticipation of taxes	$2,000,000 00	
Dependent Aid	70,000 00	
		2,070,000 00

COMMISSIONERS OF SINKING FUNDS

Street Loan	$75,000 00	
Schoolhouse Loan	42,000 00	
		117,000 00

COMMISSIONERS OF WATER SINKING FUNDS

Water Loans	41,000 00
Tax lien	4,840 35
Total	$8,149,043 78
To cash on hand, April 1, 1919	126,864 79
	$8,275,908 57

Note—Receipts from Sundry departmental refunds, reappropriated $55,167 70

PAYMENTS

GENERAL GOVERNMENT

CITY COUNCIL EXPENSES

Personal Service:			
Salaries of Councillors		$7,506 39	
Service Other Than Personal:			
Printing and binding	$1,137 24		
Postage	21 72		
Advertising and posting	813 79		
Transportation of persons	2,960 85		
Rent of chairs	21 07		
Services of expert—Investigation of Gas Company	565 00		
Fees, service of venires, etc.	142 22		
Photographic and blue-printing	21 56		
General plant	34 50		
		5,717 95	
Supplies:			
Office	$607 02		
Food and ice	28 31		
		635 33	
Incidental Expenditures:			
Funerals, refreshments, etc.		3,435 38	
			$17,295 05

CLERK OF COMMITTEES' DEPARTMENT

Personal Service:			
Permanent employees		$5,053 29	
Service Other Than Personal:			
Postage	$63 00		
Communication	166 43		
		229 43	
Supplies:			
Office		90 56	
Special Items:			
Pensions		450 00	
			5,823 28

EXECUTIVE DEPARTMENT

Personal Service:			
Permanent employees		$9,555 00	
Service Other Than Personal:			
Printing and binding	$19 05		
Postage	115 44		
Transportation of persons	413 07		
	$547 56	$9,555 00	$23,118 33

General Government—Continued

EXECUTIVE DEPARTMENT—Concluded

Amount brought forward	$547 56	$9,555 00	$23,118 33
Express	32		
Rent, taxes and water	131 04		
Communication	318 69		
Motor vehicle repairs and care	746 06		
Testing materials and supplies	7 35		
Fees	10 00		
General plant	3 67		
		1,764 69	
Supplies:			
Office	$458 46		
Food and ice	58 31		
Motor vehicle	460 13		
		976 90	
Incidental Expenditures:			
Entertainments, etc.		1,379 51	
			13,676 10

AUDITING DEPARTMENT

Personal Service:			
Permanent employees		$8,137 73	
Service Other Than Personal:			
Postage	$30 43		
Transportation of persons	27 26		
Communication	92 07		
		149 76	
Supplies:			
Office	$4,900 87		
Food and ice	48 02		
		4,948 89	
			13,236 38

AUDITING SPECIAL

Supplies:			
Office		$653 72	
			653 72

TREASURER'S AND COLLECTOR'S DEPARTMENT

Personal Service:			
Permanent employees		$18,582 21	
Service Other Than Personal:			
Printing and binding	$42 38		
Postage	1,741 45		
Advertising and posting	259 16		
Transportation of persons	600 23		
Express	35		
Amount carried forward.....	$2,643 57	$18,582 21	$50,684 53

General Government—Continued

TREASURER'S AND COLLECTOR'S DEPARTMENT—Concluded

Amount brought forward	$2,643 57	$18,582 21	$50,684 53
Premium on surety bonds	279 00		
Communication	381 70		
Fees	3,924 73		
		7,229 00	
Equipment:			
Office		73 50	
Supplies:			
Office	$1,505 66		
Food and ice	56 35		
		1,562 01	
			27,446 72

ADMINISTRATION OF SINKING FUNDS

Personal Service:			
Salary of Treasurer of Sinking Funds	$300 00		
Salary of Secretary	200 00		
		$500 00	
Transportation	$4 00		
Rent of box in vault	40 00		
		44 00	
			544 00

ASSESSOR'S DEPARTMENT

Personal Service:			
Permanent employees		$18,498 50	
Service Other Than Personal:			
Printing and binding	$154 84		
Postage	20 67		
Advertising and posting	53 08		
Transportation of persons	310 04		
Express	1 40		
Rent, taxes and water	27 44		
Communication	239 02		
		806 49	
Equipment:			
Office		238 34	
Supplies:			
Office	$554 08		
Food and ice	64 04		
		618 12	
			20,161 45
Amount carried forward			$98,836 70

General Government—Continued

POLICE LISTING BOARD

Amount brought forward			$98,836 70
Personal Service:			
Permanent employees		$444 85	
Service Other Than Personal:			
Printing and binding	$1,599 40		
Advertising and posting	208 26		
Rent, taxes and water	54 88		
		1,862 54	
Supplies:			
Office		70 80	
			2,378 19

LICENSE COMMISSIONER

Personal Service:			
Permanent employees		$2,934 01	
Service Other Than Personal:			
Postage	$7 26		
Communication	88 52		
Stenographic, copying, indexing	5 50		
		101 28	
Equipment:			
Office		191 10	
Supplies:			
Office	$734 11		
General plant	62 03		
		796 14	
			4,022 53

CITY CLERK'S DEPARTMENT

Personal Service:			
Permanent employees		$10,127 66	
Service Other Than Personal:			
Printing and binding	$23 52		
Postage	156 05		
Transportation of persons	10 32		
Premium on surety bond	12 00		
Communication	175 29		
Fees	839 33		
General plant	20 16		
		1,236 67	
Equipment:			
Office		130 30	
Amount carried forward		$11,494 63	$105,237 42

General Government—Continued

CITY CLERK'S DEPARTMENT—Concluded

Amount brought forward		$11,494 63	$105,237 42
Supplies:			
Office	$643 04		
Food and ice	57 33		
		700 37	
			12,095 00

RECORD OF ENLISTED MEN

Personal Service:			
Temporary employees		$131 00	
Supplies:			
Office		1 35	
			138 35

INSPECTION OF JUNK SHOPS AND GARAGES

Personal Service:			
Permanent employees		$1,415 15	
			1,415 15

CITY MESSENGER'S DEPARTMENT

Personal Service:			
Permanent employees		$2,528 39	
Service Other Than Personal:			
Postage	$36 00		
Transportation of persons	72 00		
Express	27		
Rent, taxes, water	2 00		
Communication	177 05		
		287 32	
Supplies:			
Office		152 30	
			2,968 01

LAW DEPARTMENT

Personal Service:			
Permanent employees		$4,488 50	
Service Other Than Personal:			
Postage	$46 00		
Transportation of persons	23 20		
Rent, taxes, water	300 00		
Communication	65 00		
Stenographic, copying, indexing	18 03		
Fees	2,203 58		
Photographic and blue-printing	19 95		
		2,675 76	
Amount carried forward	$2,675 76	$7,164 26	$121,853 93

General Government—Continued

LAW DEPARTMENT—Concluded

Amount brought forward	$2,675 76	$7,164 26	$121,853 93
Supplies:			
Office	$177 44		
Food and ice	22 05		
Library	12 80		
		212 29	
			7,376 55

ELECTION EXPENSES (CITY CLERK'S)

Personal Service:			
Election officers	$3,829 50		
Precinct men	355 00		
Primary officers	1,239 50		
Clerical assistants, filing returns, etc.	956 90		
		$6,380 90	
Service Other Than Personal:			
Printing and binding	$353 50		
Postage	295 03		
Advertising and posting	412 73		
Transportation of persons	266 43		
Express	191 45		
Fees	37 00		
General plant	96 04		
		1,652 18	
Supplies:			
Office	$1,143 53		
Food and ice	90 36		
General plant	1 13		
		1,235 02	
			9,268 10

REGISTRAR OF VOTERS

Personal Service:			
Registrars, clerk of board, etc.		$4,690 93	
Service Other Than Personal:			
Printing and binding	$1,062 18		
Postage	97 00		
Advertising and posting	227 13		
Transportation of persons	54 39		
Express	68 60		
Communication	72 63		
General plant	168 85		
		1,750 78	
Supplies:			
Office	$153 89		
Laundry, toilet, cleaning	5 88		
		159 77	
Amount carried forward		$6,601 48	$138,498 58

General Government—Continued

REGISTRARS OF VOTERS—Concluded

Amount brought forward		$6,601 48	$138,498 58
Special Items:			
Pensions		494 00	
			7,095 48

POLLING PLACES

Personal Service:			
Temporary employees		$623 50	
Service Other Than Personal:			
Cartage and freight	$354 27		
Rent, taxes, water	470 00		
General plant	1,062 20		
		1,886 47	
Supplies:			
General plant		16 16	
			2,526 13

ENGINEERING DEPARTMENT

Personal Service:			
Permanent employees		$10,821 63	
Service Other Than Personal:			
Postage	$1 00		
Transportation of persons	343 52		
Express	37		
Communication	186 61		
Medical	4 00		
		535 50	
Supplies:			
Office	$319 69		
General plant	2 41		
		322 10	
			11,679 23

SUMMARY—EXPENDED

For highways	$2,267 39	
Assessors' plans	433 63	
Law Department	179 91	
Parks	137 66	
Bridges	239 21	
Cemetery	87 91	
Sidewalks	82 87	
Sewers	793 80	
Water	359 70	
Amount carried forward	$4,582,08	$159,799 42

General Government—Continued

ENGINEERING DEPARTMENT—Concluded

Amount brought forward		$4,582,08	$159,799 42
General Engineering:			
Accounts	$567 00		
General surveys and levels	225 15		
Location plans	826 86		
Unclassified	1,495 54		
City engineer	3,125 00		
		6,239 55	
		$10,821 63	

ASSESSORS' PLANS

Personal Service:			
Services of engineers and assistants		$200 00	
			200 00

INSPECTION OF BUILDINGS

Personal Service:			
Permanent employees		$8,790 60	
Service Other Than Personal:			
Postage	$52 30		
Transportation of persons	250 00		
Communication	201 84		
Motor vehicle repairs and care	30 94		
Expert—care of clocks	117 00		
Fees	10 00		
		662 08	
Supplies:			
Office	$295 55		
Motor vehicle	329 72		
General plant	63		
		625 90	
Special Items:			
Pensions		1,135 00	
			11,213 58

CIVIL SERVICE REGISTRATION

Personal Service:			
Permanent employees		$400 00	
Service Other Than Personal:			
Postage	$10 93		
General plant	6 08		
Supplies:			
Office		4 90	
		17 01	
			421 91
Amount carried forward			$171,634 91

General Government—Continued

MUNICIPAL BUILDINGS

Amount brought forward			$171,634 91
Personal Service:			
Permanent employees		$17,312 30	
Service Other Than Personal:			
Light and power	$1,971 01		
Boiler inspection	35 00		
General plant	2,625 91		
		4,631 92	
Equipment:			
General plant		2,473 46	
Supplies:			
Fuel	$6,258 42		
Laundry, cleaning, toilet	127 22		
General plant	873 01		
		7,258 65	
			31,676 33

PROTECTION OF LIFE AND PROPERTY

POLICE DEPARTMENT

Personal Service:			
Salaries and wages		$280,510 88	
Service Other Than Personal:			
Printing and binding	$21 81		
Postage	49 00		
Transportation of persons	575 12		
Hire of teams and auto trucks	77 18		
Light and power	1,164 55		
Rent for automobile	29 40		
Communication	603 63		
Motor vehicles repair and care	828 04		
Fees	12 76		
Photographic and blue-printing	13 38		
General plant	61 72		
		3,436 59	
Equipment:			
Motor vehicles	$1,882 62		
Furniture and fittings	25 73		
Office	84 34		
Wearing apparel	442 47		
General plant	410 56		
Insignia	280 77		
		3,126 49	
Supplies:			
Office	$726 78		
Food and ice	151 58		
Amount carried forward	$878 36	$287,073 96	$203,311 24

PROTECTION OF LIFE AND PROPERTY—Continued

POLICE DEPARTMENT—Concluded

Amount brought forward	$878 36	$287,073 96	$203,311 24
Medical, surgical and laboratory	115 96		
Laundry, cleaning, toilet	79 73		
Motor vehicle	1,030 38		
General plant	58 95		
		2,163 38	
Special Items:			
Pensions		9,898 40	
			299,135 74

FIRE DEPARTMENT

Personal Service:			
Salaries and wages		$228,223 09	
Service Other Than Personal:			
Postage	$15 00		
Advertising and posting	5 88		
Transportation of persons	200 00		
Express	9 46		
Hire of teams and auto trucks	297 00		
Light and power	987 17		
Communication	90 23		
Motor vehicle repairs and care	1,879 30		
Motorless vehicle repairs	164 29		
Fees	20 00		
General plant	63 90		
Horseshoeing and clipping	1,974 01		
		5,706 24	
Equipment:			
Motor vehicles	$19,082 70		
Furniture and fittings	151 23		
Wearing apparel	40 18		
		19,274 11	
Supplies:			
Office	$182 71		
Food and ice	104 47		
Fuel	5,717 21		
Forage and animal	6,687 08		
Laundry, cleaning and toilet	822 75		
Motor vehicle	925 34		
Chemicals and disinfectants	176 99		
General plant	3,649 12		
		18,265 67	
Special Items:			
Pensions		24,784 95	
			296,254 06
Amount carried forward			$798,701 04

PROTECTION OF PERSONS AND PROPERTY—Continued

ELECTRICAL DEPARTMENT

Amount brought forward			$798,701 04
Personal Service:			
Permanent and temporary employees		$24,818 29	
Service Other Than Personal:			
Postage	$10 00		
Transportation of persons	354 00		
Express	11 09		
Light and power	128 12		
Rent, taxes, water	192 00		
Communication	93 02		
Motor vehicle repairs and care	86 09		
Fees	25 00		
		899 32	
Equipment:			
Apparatus, cable, wire, etc.	$641 14		
Electrical	86 95		
Tools and instruments	24 70		
		752 79	
Supplies:			
Office	$183 26		
Food and ice	70 00		
Laundry, cleaning, toilet	31 74		
Motor vehicle	998 58		
General plant	1,070 21		
		2,353 79	
			28,824 29

SEALER OF WEIGHTS AND MEASURES

Personal Service:			
Permanent employees		$6,324 00	
Service Other Than Personal:			
Printing and binding	$26 22		
Postage	5 00		
Advertising	10 29		
Transportation of persons	94 25		
Rent, taxes, water	188 86		
Communication	30 14		
Motor vehicle repairs and care	117 30		
Care of horses	93 75		
Stenographic, copying, indexing	3 58		
Fees	20 00		
Horseshoeing and clipping	9 00		
		598 39	
Equipment:			
Motor vehicles	$598 39		
Tools and instruments	174 67		
		773 06	
Amount carried forward			$827,525 33

PROTECTION OF PERSONS AND PROPERTY—Concluded

SEALER OF WEIGHTS AND MEASURES—Concluded

Amount brought forward			$827,525 33
Supplies:			
Office	$48 89		
Motor vehicle	294 44		
General plant	26 86		
		370 19	
			8,065 64

PARK DEPARTMENT—FORESTRY

Personal Service:			
Temporary employees		$9,628 49	
Service Other Than Personal:			
Advertising and posting	$4 41		
Hire of teams and auto trucks	349 25		
Motor vehicle repairs and care	49 38		
General plant	29 73		
		432 77	
Supplies:			
Agricultural	$71 45		
Chemicals and disinfectants	422 55		
General plant	81 83		
		575 83	
Material:			
Highway		1 25	
			10,638 34

GAME WARDEN

Personal Service:			
Salary of game warden		50 00	
			50 00

EMERGENCY INFLUENZA

Service Other Than Personal:			
Hire of teams and auto trucks	$25 48		
Communication	17 05		
		42 53	
Supplies:			
General plant		18 37	
			60 90

HEALTH AND SANITATION

BOARD OF HEALTH

Personal Service:			
For salaries of:			
Medical Inspectors	$3,073 52		
Bacteriologist	1,080 00		
Amount carried forward		$4,153 52	$846,340 21

HEALTH AND SANITATION—Continued

HEALTH DEPARTMENT—Concluded

Amount brought forward		$4,153 52	$846,340 21
Sanitary Inspectors	6,191 84		
Inspector of Provisions and slaughtering	3,090 32		
Office employees, social workers and driver	5,640 58		
School physicians and school nurses	8,970 23		
Infant welfare nurses	1,242 06		
Dispensary physician and nurse	1,401 23		
Culture collector	162 00		
		30,851 78	
Service Other Than Personal:			
Printing and binding	$119 80		
Postage and stationery	117 10		
Advertising and posting	44 34		
Transportation of persons	1,531 90		
Express	3 91		
Rent	118 06		
Communication	243 04		
Motor vehicle repairs	152 54		
Care of persons	13,950 73		
Disposal of dead animal	25		
Fees, service of venires, etc.	17 24		
General plant	5 91		
		16,304 82	
Supplies:			
Office	$1,074 03		
Food and ice	81 92		
Medical, surgical, laboratory	425 24		
Motor vehicle	319 25		
Chemicals and disinfectants	104 12		
General plant	61 29		
		2,065 85	
Special Items:			
Pensions		600 00	
			49,822 45

TUBERCULOSIS HOSPITAL

Personal Service:			
Permanent and temporary employees		$19,283 45	
Service Other Than Personal:			
Postage	$10 00		
Express	21 40		
Light and power	116 63		
Insurance	82 90		
Communication	93 56		
Amount carried forward	$324 49	$19,283 45	$896,162 66

HEALTH AND SANITATION—Continued

TUBERCULOSIS HOSPITAL—Concluded

Amount brought forward	$324 49	$19,283 45	$896,162 66
Medical	17 00		
Extermination of insects	1 60		
General plant	3,530 44		
		3,873 53	
Equipment:			
Furniture and fittings		147 83	
Supplies:			
Office	$35 20		
Food and ice	22,995 05		
Fuel	5,899 21		
Medical, surgical and laboratory	1,540 92		
Laundry, cleaning, toilet	307 32		
Agricultural	84		
General plant	1,704 24		
		32,482 78	
			55,787 59

INSPECTION OF ANIMALS

Personal Service:			
Salary of Inspector		$1,450 00	
Service Other Than Personal:			
Transportation		600 00	
Supplies:			
Medical, surgical and laboratory		378 43	
			2,428 43

INSPECTION OF MILK AND VINEGAR

Personal Service:			
Permanent employees		$2,615 32	
Service Other Than Personal:			
Postage	$20 00		
Transportation of persons	100 00		
Rent, taxes, water (auto storage)	7 35		
Fees	22 00		
		149 35	
Equipment:			?
Motor vehicle		559 05	
Supplies:			
Office	$70 65		
Medical, surgical and laboratory	142 04		
Laundry, cleaning and toilet	17 83		
Motor vehicle	393 66		
		624 18	
			3,947 90
Amount carried forward			$958,326 58

HEALTH ASD SANITATION—Continued

Amount brought forward			$958,326 58

SCHOOL DENTIST

Personal Service:			
Permanent employees		$1,443 20	
Supplies:			
Medical, surgical and laboratory		49 31	
			1,492 51

SUPPRESSION OF FLIES AND MOSQUITOES

Personal Service:			
Temporary employees		$3,017 89	
Service Other Than Personal:			
Advertising and posting	$9 21		
Transportation of persons	15 00		
Hire of teams and auto trucks	590 50		
		614 71	
Equipment:			
Motor vehicles		200 59	
Supplies:			
Fuel	$207 40		
General plant	186 34		
		393 74	
			4,226 93

SEWER MAINTENANCE

Personal Service:			
Permanent and temporary employees		$16,416 04	
Service Other Than Personal:			
Postage	$5 00		
Advertising and posting	14 95		
Transportation of persons	29 00		
Light and power	12 88		
Communication	61 79		
Motor vehicle repairs and care	1,014 22		
Motorless vehicle repairs	45 72		
Cleaning	88 20		
Medical	20 00		
Fees, service of venires, etc.	178 00		
General plant	41 51		
Horseshoeing and clipping	67 34		
		1,578 61	
Equipment:			
Motor vehicles	$568 00		
Stable	18 13		
Tools and instruments	14 70		
		600 83	
Amount carried forward		$18,595 48	$964,046 02

HEALTH AND SANITATION—Concluded

SEWER MAINTENANCE—Concluded

Amount brought forward		$18,595 48	$964,046 02
Supplies:			
Office	$41 31		
Fuel	131 63		
Forage and animal	461 49		
Motor vehicle	2,579 91		
General plant	16 46		
		3,230 80	
Material:			
Building	$13 18		
Sewer	381 45		
		394 63	
Special Items:			
Pensions	$2,382 33		
Workingmen's Compensation	51 42		
		2,433 75	
			24,654 66

STREET DEPARTMENT—SANITARY DIVISION

Refuse and Garbage Disposal

Personal Service:			
Permanent and temporary employees		$170,309 68	
Service Other Than Personal:			
Motor vehicle repairs and care	$716 83		
Medical	414 90		
Fees	36 00		
General plant	310 12		
		1,477 85	
Equipment:			
General plant		211 61	
Supplies:			
Medical, surgical and laboratory	$35 68		
Motor vehicle	2,104 54		
General plant	33 37		
		2,173 59	
Special Items:			
Pensions	$1,857 64		
Compensation	1,525 33		
		3,382 97	
			177,555 70
Amount carried forward			$1,166,256 38

HIGHWAYS AND BRIDGES

STREET DEPARTMENT MAINTENANCE

Amount brought forward			$1,166,256 38
Personal Service:			
Permanent and temporary employees		$149,333 16	
Service Other Than Personal:			
Printing and binding	$86 73		
Postage	60 12		
Advertising and posting	90 31		
Cartage and freight	24 74		
Hire of teams and auto trucks	8,083 20		
Light and power	435 92		
Communication	196 17		
Motor vehicle repairs and care	577 90		
Medical	167 00		
Testing materials and supplies	36 75		
Fees	62 00		
General plant	1,328 37		
		11,149 21	
Equipment:			
Apparatus	$318 50		
Motor vehicles	1,087 60		
Tools and instruments	513 97		
Live stock	2,508 80		
Wearing apparel (rubber boots)	6 86		
General plant	234 91		
		4,670 64	
Supplies:			
Office	$487 86		
Fuel	259 24		
Motor vehicle	3,196 94		
General plant	2,245 53		
		6,189 57	
Material:			
Highway	$17,456 62		
Bridges	1,470 92		
		18,927 54	
Special Items:			
Contracts for construction where money is derived from taxes, as per Schedule B	$5,541 71		
Huron Avenue Bridge	1,327 88		
Pensions	10,514 51		
Compensation	1,743 89		
		19,127 99	
			209,398 11
Amount carried forward			$1,375,654 49

HIGHWAYS AND BRIDGES—Continued

STREET DEPARTMENT STABLE ACCOUNT

Amount brought forward			$1,375,654 49
Personal Service:			
Permanent and temporary employees		$46,300 85	
Service Other Than Personal:			
Light and power	$674 54		
Communication	160 94		
Motorless vehicle repairs	112 70		
Medical	12 00		
Veterinary	16 25		
General plant	99 15		
Horseshoeing and clipping	20 06		
		1,095 64	
Equipment:			
Tools and instruments		16 91	
Supplies:			
Food and ice	$27 54		
Fuel	1,697 07		
Forage and animal	27,439 03		
Laundry, cleaning, toilet	7 74		
Chemicals and disinfectants	23 52		
General plant	6,277 82		
		35,472 72	
Special Items:			
Workingmen's compensation		25 07	
			82,911 19

BOSTON AND CAMBRIDGE BRIDGES

Personal Service:			
Permanent and temporary employees		$15,256 37	
Service Other Than Personal:			
Printing and binding	$42 35		
Transportation of persons	72 00		
Hire of teams and auto trucks	152 75		
Light and power	2,869 83		
Communication	20 64		
General plant	5,433 62		
		8,591 19	
Supplies:			
Office	$5 29		
Food and ice	15 07		
Fuel	102 58		
General plant	274 15		
		397 09	
Amount carried forward		$24,244 65	$1,459,565 68

HIGHWAYS AND BRIDGES—Concluded

BOSTON AND CAMBRIDGE BRIDGES—Concluded

Amount brought forward		$24,244 65	$1,459,565 68
Material:			
Bridges		2,356 50	
Special Items:			
Pensions		250 00	
			26,851 15

STREET LIGHTING

Service Other Than Personal:			
Lighting streets, alleys and parks	77,730 03		
Communication	32 83		
		77,765 86	
			77,765 86

CHARITIES

CITY HOME

Personal Service:			
Permanent and temporary employees		$14,836 01	
Service Other Than Personal:			
Postage	$21 00		
Advertising and posting	9 95		
Transportation of persons	204 16		
Hire of teams and auto trucks	202 94		
Light and power	493 96		
Communication	91 78		
Motorless vehicle repairs	42 63		
Care of persons	14 92		
Medical	2 00		
Religious	77 00		
Fees	2 00		
Boiler inspection	35 28		
Burials	168 00		
General plant	428 85		
Harness, etc., repairs	11 76		
Horseshoeing and clipping	80 49		
		1,886 72	
Equipment:			
Furniture and fittings	$328 05		
Tools and instruments	16 76		
General plant	1,483 49		
		1,828 30	
Amount carried forward		$18,551 03	$1,563,182 69

CHARITIES— Continued

CITY HOME

Amount brought forward		$18,551 03	$1,563,182 69
Supplies:			
Office	$38 65		
Food and ice	14,502 43		
Fuel	2,685 92		
Forage and animal	587 31		
Medical, surgical, laboratory	533 23		
Laundry, cleaning, toilet	215 86		
Agricultural	316 08		
Chemicals and disinfectants	81 83		
Tobacco	389 43		
General plant	338 30		
		19.689 04	
Material:			
Building		49 23	
Special Items:			
Care of dependents		608 75	
			38,898 05

OUTSIDE AID

Personal Service:			
Permanent and temporary employees		$10.798 24	
Service Other Than Personal:			
Printing and binding	$2 94		
Postage	24 00		
Transportation of persons	1,068 66		
Light and power	33 75		
Rent, taxes, water	100 28		
Communication	127 47		
Motor vehicle repairs and care	55 92		
Care of persons	2,274 83		
Medical	12 02		
Fees	10 00		
Burials	279 00		
		3,988 87	
Equipment:			
Office	$5 49		
General plant	553 38		
		558 87	
Supplies:			
Office	$175 80		
Food and ice	2,097 73		
Fuel	584 97		
Medical, surgical and laboratory	725 42		
Motor vehicle	109 30		
General plant	37 85		
		3,731 07	
Amount carried forward		$19,077 05	$1,602,080 74

CHARITIES—Concluded

OUTSIDE AID—Concluded

Amount brought forward		$19,077 05	$1,602,080 74
Special Items:			
Care of dependents	$50,870 08		
Mothers' aid	63,745 67		
		114,615 75	
			133,692 80

SOLDIERS' BENEFITS

STATE AID AND SOLDIERS' RELIEF

Personal Service:			
Permanent and temporary employees		$5,535 32	
Service Other Than Personal:			
Printing and binding	$102 03		
Postage	23 80		
Transportation	32 17		
Communication	88 52		
Motor vehicle repairs and care	77 79		
Care of persons	757 85		
Medical	79 95		
Fees	10 00		
Registration, returning soldiers	172 20		
		1,344 31	
Equipment:			
Furniture and fittings		259 85	
Supplies:			
Office	60 21		
Food and ice	66 64		
Motor vehicle	223 13		
		349 98	
Special Items:			
Pensions	$350 00		
State and Military Aid, Soldiers' Relief and burials	58,111 02		
		58,461 02	
Incidental Expenditures:			
Care of graves		163 38	
			66,113 86

MUNICIPAL HOSPITAL

Personal Service:			
Permanent and temporary employees		$24,908 31	
Amount carried forward		$24,908 31	$1,801,887 40

MUNICIPAL HOSPITAL—Concluded

Amount brought forward		$24,908 31	$1,801,887 40
Service Other Than Personal:			
Advertising and posting	$6 60		
Transportation of persons	25 00		
Express	63 94		
Light and power	4,323 03		
Communication	411 71		
Cleaning	276 58		
Medical	133 00		
Examinations	20 00		
Boiler inspection	10 00		
General plant	130 27		
		5,400 13	
Equipment:			
Electrical	$277 25		
Furniture and fittings	172 75		
Medical, surgical and laboratory	186 20		
Wearing apparel	90 55		
General plant	89 62		
		816 37	
Supplies:			
Office	$411 72		
Food and ice	16,587 95		
Fuel	4,412 02		
Medical, surgical, laboratory	6,842 21		
Laundry, cleaning, toilet	721 09		
Agricultural	1 71		
General plant	1,908 31		
		30,885 01	
			62,009 32

EDUCATION

SCHOOL COMMITTEE EXPENSES

For Administrative salaries	$8,237 78	
Other general salaries	20,844 30	
Teachers' salaries	710,812 97	
General expenses	9,297 34	
Text books and supplies	45,525 78	
Tuition, industrial schools	383 40	
Transportation of pupils	449 00	
Support of truants	63 15	
Employees at High School Lunch	1,690 00	
High School Lunch supplies	5,787 03	
Fuel and light	33,993 87	
Maintenance of buildings and grounds	18,656 95	
Furniture and furnishings	416 77	
Other school expenses	2,879 38	
Amount carried forward	$859,037 72	$1,863,897 22

EDUCATION—Concluded

SCHOOL OMMITTEE EXPESSES—Concluded

Amount brought forward		$859,037 72	$1,863,897 22
Equipment for Rindge Technical School		7,448 52	
Janitors' salaries		66,604 29	
Minor licenses		51 75	
Janitors' pensions		2,336 00	
Pension of agent		1,420 00	
Total			$936,898 28

THORNDIKE SCHOOL BATHS

Personal Service:			
Temporary employees		$1,046 46	
Supplies:			
Soap	$27 25		
Towels	85 75		
		113 00	
			1,159 46

HAGGERTY BATHS

Personal Service:			
Temporary employees		$553 68	
Service Other Than Personal:			
Laundry		17 40	
Supplies:			
Soap		13 92	
			585 00

INSTALLING SHOWER BATHS—ROBERTS SCHOOL

Personal Service:			
Temporary employees		$144 00	
Service Other Than Personal:			
Installing boiler	$850 00		
Installing electric lights	171 42		
Carpentry	32 68		
Granolithic floor	72 03		
Painting	158 32		
Steel lockers	70 56		
		1,355 01	
Supplies:			
Soap	$6 96		
Towels	31 85		
		38 81	
			1,537 82
Amount carried forward			$2,804,077 78

LIBRARIES

CENTRAL LIBRARY AND BRANCHES

Amount brought forward			$2,804,077 78
Personal Service:			
Permanent and temporary employees		$27,000 74	
Service Other Than Personal:			
Printing and binding	$2,060 10		
Postage	152 35		
Advertising and posting	10 04		
Transportation of persons	50 00		
Express	36 35		
Hire of teams and auto trucks	375 84		
Light and power	947 82		
Rent, branch libraries	756 00		
Insurance	954 84		
Communication	239 40		
Motor vehicle repairs and care	70 58		
Fees	10 00		
Boiler inspection	10 00		
General plant	242 10		
		5,915 42	
Equipment:			
Electrical	$20 82		
Motor vehicles	825 00		
Furniture and fittings	357 81		
		1,203 63	
Supplies:			
Office	$165 17		
Food and ice	59 21		
Fuel	1,511 91		
Library	7,047 01		
Laundry, cleaning, toilet	19 98		
Motor vehicle	14 36		
General plant	196 97		
		9,014 61	
			43,134 40

RECREATION

PARK DEPARTMENT MAINTENANCE

Personal Service:			
Permanent and temporary employees		$40,956 79	
Service Other Than Personal:			
Printing and binding	$14 21		
Postage	59 62		
Advertising and posting	5 14		
Cartage and freight	14 46		
Hire of teams and auto trucks	346 16		
Amount carried forward	$439 59	$40,956 79	$2,847,212 18

RECREATION—Continued

PARK DEPARTMENT MAINTENANCE—Concluded

SERVIEE OTHER THAN PERSONAL—Concluded

Amount brought forward	$439 59	$40,956 79	$2,847,212 18
Light and power	88 27		
Lighting streets and parks	5,333 22		
Rent, taxes, water	165 92		
Communication	204 23		
Motor vehicle repairs and care	375 23		
Towing	127 40		
Fees	2 00		
General plant	2,697 61		
		9,433 47	
Equipment:			
Electrical	$514 42		
Motor vehicle	630 50		
Furniture and fittings	263 62		
Medical, surgical, laboratory	132 30		
Tools and instruments	649 81		
General plant	14 94		
		2,205 59	
Supplies:			
Office	$372 33		
Food and ice	62 57		
Fuel	936 04		
Medical	9 90		
Laundry, cleaning, toilet	944 80		
Educational and recreational	17 55		
Agricultural	716 62		
Motor vehicle	729 86		
General plant	2,181 85		
		5,971 52	
Materials:			
Highway	$1,716 96		
Sewer	17 39		
Parks and recreational	31 24		
		1,765 59	
Special Items:			
Pensions		1,019 77	
			61,352 73

SAND AT MAGAZINE BEACH

Personal Service:			
Employees		$318 11	
Service Other Than Personal:			
Advertising		5 88	
Material:			
Highway		846 96	
			1,170 95
Amount carried forward			$2,909,735 86

RECREATION—Concluded

Amount brought forward			$2,909,735 86

TEMPORARY BATH HOUSE AT JERRY'S PIT

Personal Service:

Temporary employees		$176 63	
			176 63

PLAYGROUND MAINTENANCE

Personal Service:

Temporary employees		$3,348 88	

Service Other Than Personal:

Printing and binding	$17 40		
Transportation of persons	181 84		
Hire of teams and auto trucks	14 70		
Rent, taxes, water	36 26		
General plant	17 64		
Services of band	71 50		
		339 34	

Equipment:

Educational and recreational		61 52	

Supplies:

Office	$14 31		
Educational and recreational	648 22		
General plant	7 35		
		669 88	
			4,419 62

TENNIS COURTS

Personal Service:

Temporary employees		$424 47	

Material:

Highway		571 50	

Supplies:

Fuel		16 66	
			1,012 63

WARD 8 PLAYGROUND

Personal Service:

Temporary employees		$1,428 07	
			1,428 07
Amount carried forward			$2,916,772 81

UNCLASSIFIED

Amount brought forward			$2,916,772 81

POSTAGE AND STATIONERY

For postage and supplies		$238 04	
			238 04

WORKINGMEN'S COMPENSATION

Personal Service:

For salary of clerk		$500 00	
			500 00

DAMAGES TO PERSONS AND PROPERTY

Executions of Court:			
Injuries from defect in street:			
Daniel H. Coakley, attorney for Mary A. Murray	$300 00		
Hughes & Brine, attorneys for Clarinda A. Butcher	500 00		
Hennigan & Fox, attorneys for Alice I. Robertson	500 00		
Charles A. McDonough, attorney for Annie Barry	500 00		
John F. Daley, attorney for Lelia Argenzio	175 00		
John O'Hare, attorney for Anna L. Stewart	1,331 21		
Charles Shulman, attorney for Helen Saleson	576 81		
		3,883 02	
From defect in Harvard Bridge:			
John E. Hand, attorney for Eugene Monahan		$100 00	
From defective bleachers on Russell Field:			
Hughes & Brine, attorneys for Henry Murphy		60 00	
From defect on Prison Point Bridge:			
Maria Leonatta		175 00	
Award of back salary:			
Edward M. Heaney		575 26	
Injuries:			
From defect in street:			
J. L. Glynn, attorney for Margaret Mulqueeney	$100 00		
Maurice Jacobs, attorney for Bessie Kurtzberg	200 00		
Amount carried forward	$300 00	$4,793 28	$2,917,510 85

UNCLASSIFIED—Continued

DAMAGES TO PERSONS AND PROPERTY—Continued

Amount brought forward	$300 00	$4,793 28	$2,917,510 85
Hoffman & Vernon, attorneys for Sidney Alexander	10 00		
Thomas E. Glennon, attorney for Delia E. Wegeler	100 00		
Nora MacLeod	25 00		
Hannah McCarthy	200 00		
Franklin J. Phillips, attorney for John F. Cole	150 00		
Franklin J. Phillips, attorney for Harlan T. Stetson	200 00		
		985 00	
From defect in sidewalk:			
Margaret Foley	$125 00		
J. L. P. St. Coeur, attorney for Marie L. St. Coeur	125 00		
Annie Leary	10 00		
Mary M. Bresnan	20 00		
Corinne V. Ainsley	75 00		
Abigale C. Horgan	50 00		
Katherine T. Hopkins	25 00		
Sarah Quinn	100 00		
Rose Norris	75 00		
John D. Carney, attorney for Mary A. Downey	200 00		
		805 00	
Injuries:			
From fall on floor at hospital: Edmund J. Connor	$25 00		
From machinery at Webster School: Mary E. Henry, mother of Russell S. Henry	25 00		
From excavation of sewer: Wm. P. Donovan, for Elizabeth Donovan	100 00		
From fire engine: Frederick G. Allnutt	500 00		
From fire department automobile: Eugene Sullivan, attorney for Heber Brown	50 00		
At Speeler School: James Linnane	43 00		
From defect in Harvard Bridge: Jos. Santosuosso, attorney for Edw. A. Scigliano	20 00		
		763 00	
Damage to clothing:			
P. Edward Maher	$10 00		
Arthur F. Hall	10 00		
Amount carried forward	$20 00	$7,346 28	$2,917,510 85

UNCLASSIFIED—Continued

DAMAGES TO PERSONS AND PROPERTY—Continued

Amount brought forward	$20 00	$7,346 28	$2,917,510 85
John F. Cummings	25 50		
Wm. H. Robertson	14 00		
Gertrude Maguire	35 00		
Victoria M. Silk	3 50		
Nellie M. Carey	15 00		
Michael J. Mahoney	50 00		
Jennie Eadie	18 00		
Lorretta M. O'Connell	80 00		
William J. Dinan	20 00		
J. Edmund Bradley	25 00		
		306 00	
Damage to Property:			
From fallen trees:			
Mary Finney	$2 00		
John H. Reagan	50 00		
Matilda Norris	6 93		
		58 93	
Damage to Property:			
Oliver G. Tinkham	$4 25		
Jos. P. Sousa	11 25		
Carl A. Weitz	4 00		
Jos. Shaine	100 00		
Michael Kabosis	12 20		
Lawrence J. Fallon	48 64		
Frederick Franzman	41 50		
John Santora	4 50		
Josephine Smith	5 25		
Zylpha O. Mapp	7 94		
Thomas and James McSorley	6 00		
		245 53	
Reimbursement of salary, counsel fees, medical care, etc., for injuries received while on duty:			
David H. Walsh	$231 92		
James D. Russell	100 00		
Wm. F. Boyle (E. A. Counihan, attorney)	300 00		
Charles Wyman	50 00		
Timothy S. Falvey	53 03		
Patrick J. Murphy	81 42		
Denis McCarthy	30 69		
Wm. F. Biggane	48 86		
Frederick F. Collins	12 31		
Lochlin Gavin	94 90		
Frank LaMarche	35 00		
Thomas Campbell	34 50		
		1,072 63	
Amount carried forward		$9,029 37	$2,917,510 85

UNCLASSIFIED—Continued

DAMAGES TO PESONS AND PROPERTY—Concluded

Amount brought forward		$9,029 37	$2,917,510 85
Reimbursement of loss of wages:			
Wm. H. Winslow		$200 00	
Compensation due as Fire Hazard Inspector:			
G. A. Peavey, attorney for Wm. H. Lertora		500 00	
Award of medical expense:			
Henry J. O'Brien		22 00	
Total			9,751 37

PLANNING BOARD

Personal Service:			
For services of consultant		$830 00	
Service Other Than Personal:			
Printing and binding	$104 47		
Postage	5 50		
Expert and architect	142 00		
Stenographic, copying, indexing	21 45		
Photographic and blue-printing	21 00		
		294 42	
Supplies:			
Office	$36 69		
General plant	16 00		
		52 69	
Total			1,177 11

SCHOOL TEACHERS' PENSIONS

For Teachers' pensions		$8,950 00	
			8,950 00

FOOD CONSERVATION

Personal Service:			
Temporary employees		$5 00	
Service Other Than Personal:			
Postage	$5 33		
Transportation of persons	33 06		
Express	78		
Communication	85		
Cleaning	4 00		
Photographic and blue-printing	1 96		
		45 98	
Amount carried forward		$50 98	$2,937,389 33

UNCLASSIFIED—Continued

FOOD CONSERVATION—Concluded

Amount brought forward		$50 98	$2,937,389 33
Supplies:			
Office	$6 03		
Educational	1 45		
		7 48	
			58 46

TELEPHONE EXCHANGE

Communication		$324 35	
			324 35

FOOD PRODUCTS

Personal Service:			
Service of expert		$20 00	
Service Other Than Personal:			
Printing		25 00	
Incidental Expenditures:			
Prizes		47 04	
			92 04

WELCOME TO RETURNING SOLDIERS

Service Other Than Personal:			
Printing and binding	$174 41		
Postage	98 00		
Advertising and posting	198 62		
Transportation of persons	417 16		
Cartage and freight	117 44		
Hire of teams and auto trucks	63 70		
Light	7 00		
General plant	13 23		
		1,089 56	
Equipment:			
Furniture and fittings		24 50	
Supplies:			
Office	$53 50		
Educational and recreational	14 10		
General plant	77 56		
		145 16	
Amount carried forward		$1,259 22	$2,937,864 18

UNCLASSIFIED—Continued

WELCOME TO RETURNING SOLDIERS—Concluded

Amount brought forward		$1,259 22	$2,937,864 18
Incidental Expenditures:			
"Welcome Home" signs	$363 58		
Tent for banquet	400 00		
Banquet	6,975 00		
Cigars	275 67		
Entertainments	875 00		
Music	676 55		
Decorating	1,553 90		
Building check room and checking at dances	137 30		
Fireworks	2,000 00		
Prizes	91 63		
		13,348 63	
Total			14,607 85

BUREAU OF EMPLOYMENT FOR RETURNING SOLDIERS

Personal Service:			
Temporary employees		$4,223 50	
Service Other Than Personal:			
Printing and binding	$52 63		
Advertising and posting	14 68		
Rent of typewriter	37 24		
Communication	352 76		
		457 31	
Supplies:			
Office		47 73	
Total			4,728 54

AMERICANIZATION OF FOREIGN BORN

Personal Service:			
Service of teachers		$1,392 57	
Service Other Than Personal:			
Printing and binding	$38 75		
Cartage and freight	58 50		
		97 25	
Supplies:			
Office	$33 40		
Food and ice	4 82		
		38 22	
Amount carried forward		$1,528 04	$2,957,200 57

UNCLASSIFIED—Continued

AMERICANIZATION OF FOREIGN BORN—Concluded

Amount brought forward	$1,528 04	$2,957,200 57
Incidental Expenditures:		
Moving pictures, lectures, etc.	220 00	
Total		1,748 04

POST 30 G. A. R.

For rent of headquarters	$300 00	
		300 00

HEADQUARTERS FOR THE AMERICAN LEGION

For rent of headquarters	$509 10	
		509 10

MEMORIAL DAY

For observance of Memorial Day by the Grand Army of the Republic and Spanish War Veterans	1,400 00	
		1,400 00

INDEPENDENCE DAY

Services of:		
Persons serving ice cream, etc.	$90 50	
Teaming	7 87	
Automobile hire	90 16	
Bands	831 00	
Chairs	35 77	
Games	200 00	
Ice cream	352 80	
Prizes and athletic goods	260 51	
Services of umpires	175 00	
Miscelleanous	21 82	
		2,065 43

LABOR DAY

For Badges	$12 25	
Balls	16 17	
Bands	150 00	
Games	100 00	
Services of umpires	30 00	
		308 42
Amount carried forward		$2,963,531 56

UNCLASSIFIED—Concluded

Amount brought forward		$2,963,531 56

SUNDRY CELEBRATIONS

For sheet music	$6 80	
Orchestra	20 00	
Band stand	13 92	
Chairs	31 36	
Lighting	5 60	
Flags	78 40	
Pictures	25 00	
		181 08

CEMETERIES

CAMBRIDGE CEMETERY

Personal Service:			
Permanent and temporary employees		$34,467 49	
Service Other Than Personal:			
Printing and binding	$3 43		
Postage	55 00		
Advertising and posting	3 43		
Transportation	30 00		
Hire of teams and auto trucks	134 51		
Light and power	56 65		
Premium on surety bond	18 00		
Communication	81 82		
Motorless vehicle repairs	21 07		
Fees	34 00		
General plant	118 12		
Harness, etc., repairs	58 59		
Horseshoeing and clipping	88 69		
		703 31	
Equipment:			
Machinery	$64 12		
Motor vehicle	572 25		
Tools and instruments	312 23		
General plant	75 55		
		1,024 15	
Supplies:			
Office	$254 34		
Food and ice	61 20		
Fuel	298 14		
Forage and animal	338 53		
Agricultural	130 32		
Motor vehicle	311 38		
Chemicals and disinfectants	7 80		
General plant	1,121 19		
		2,522 90	
			40,866 22
Amount carried forward			$3,004,578 86

CEMETERIES—Concluded

CAMBRIDGE CEMETERY—Concluded

Amount brought forward			$3,004,578 86
Material:			
Building	$12 41		
Highway	8 00		
General plant	1,034 40		
		1,054 81	
Special Items:			
Pensions		1,093 56	

CEMETERY GRADING

Grading		2,494 88	
			2,494 88

PUBLIC MARKET

Personal Service:			
Temporary employees		$836 16	
Service Other Than Personal:			
Printing	$13 23		
Advertising	144 16		
Rent (auto storage)	69 40		
Motor vehicle repairs and care	165 36		
		392 15	
Equipment:			
Electrical		$98 00	
Supplies:			
Motor vehicle	$349 79		
General plant	1 96		
		351 75	
			1,678 06

INTEREST AND MATURING DEBT

MUNICIPAL SERIAL LOANS

For loans that have matured as follows:		
Cambridge Bridge	$2,000 00	
Sewer Construction	6,000 00	
Street	136,650 00	
Building	20,000 00	
School	11,750 00	
Park	5,000 00	
Playground	1,300 00	
Sewer Separate System	3,000 00	
Hospital	7,500 00	
Municipal	1,000 00	
Additional Departmental Equipment	7,000 00	
		201,200 00
Amount carried forward		$3,209,951 80

Amount brought forward		$3,209,951 80

INTEREST

For interest on loans in anticipation of taxes	$60,784 68	
Saunders Temperance Fund	161 10	
Daniel White Charity Fund	300 00	
Dowse Fund	1,200 00	
Building Loan	12,418 75	
City Loan, Acts of 1908	280 00	
Cambridge Bridge	58,988 00	
Harvard Bridge	3,160 00	
Commercial Avenue Bridge	2,000 00	
Cambridge Bridge, Special	3,605 00	
Hospital Loan	12,520 00	
Metropolitan Park Assessment	1,610 00	
Public Library Loan	945 00	
Schoolhouse Loan	35,026 38	
Sewer Loan	45,693 75	
Cemetery Loan	280 00	
Park Loan	60,080 00	
Playground Loan	5,494 00	
Charles River Basin Improvement	5,900 00	
Street Loan	74,708 25	
Municipal Loan	5,394 50	
Departmental Equipment	1,575 00	
		392,124 41

DETAIL OF SINKING FUNDS

SINKING FUNDS

BROOKLINE BRIDGE

Amount of fund, March 31, 1919	$4,984 57	
Interest, 1919	230 29	
Appropriation for 1919	333 33	
Amount of Fund, March 31, 1920		$5,548 19

CAMBRIDGE BRIDGE

Amount of Fund, March 31, 1919	$324,906 06	
Interest, 1919	26,907 16	
Appropriation for 1919	11,566 66	
Amount of Fund, March 31, 1920		363,379 88
Amount carried forward		$3,602,076 21

DETAIL OF SINKING FUNDS—Continued

Amount brought forward			$3,602,076 21

CAMBRIDGE BRIDGE SPECIAL

Amount of Fund, March 31, 1919 ...	$11,148 17	
Interest, 1919	515 04	
Appropriation for 1919	616 00	
Amount of Fund, March 31, 1920 ...		12,279 21

CHARLES RIVER BASIN

Amount of Fund, March 31, 1919 ...	$42,748 66	
Interest, 1919	1,974 99	
Appropriation for 1919	5,400 00	
Amount of Fund, March 31, 1920 ...		50,123 65

COMMERCIAL AVENUE BRIDGE

Amount of Fund, March 31, 1919 ...	$9,969 22	
Interest, 1919	460 58	
Appropriation for 1919	666 66	
Amount of Fund, March 31, 1920 ...		11,096 46

HARVARD BRIDGE

Amount of Fund, March 31, 1919 ...	$99,217 48	
Interest, 1919	4,583 85	
Appropriation for 1919	4,180 00	
Amount of Fund, March 31, 1920 ...		107,891 33

HOSPITAL, ACTS OF 1895

Amount of Fund, March 31, 1919 ...	$55,301 85	
Interest, 1919	2,554 95	
Appropriation for 1919	5,625 00	
Amount of Fund, March 31, 1920 ...		63,481 80

METROPOLITAN PARK ASSESSMENT

Amount of Fund, March 31, 1919 ...	$21,691 81	
Interest, 1919	1,002 16	
Appropriation for 1919	1,012 00	
Amount of Fund, March 31, 1920 ...		$23,705 97
Amount carried forward		$3,602,076 21

DETAIL OF SINKING FUNDS—Concluded

Amount brought forward			$3,602,076 21
PARK			
Amount of Fund, March 31, 1919	$758,098 26		
Interest, 1919	35,024 14		
Appropriation for 1919	25,666 67		
Amount of Fund, March 31, 1920		818,789 07	
PLAYGROUNDS			
Amount of Fund, March 31, 1919	$19,853 32		
Interest, 1919	917 22		
Appropriation for 1919	2,090 00		
Amount of Fund, March 31, 1920		22,860 54	
IMPROVED SEWERAGE			
Amount of Fund, March 31, 1919	$197,083 33		
Interest, 1919	9,105 25		
Appropriation for 1919	8,778 00		
Amount of Fund, March 31, 1920		214,966 58	
SEPARATE SYSTEM OF DRAINAGE			
Amount of Fund, March 31, 1919	$71,984 72		
Interest, 1919	3,325 69		
Appropriation for 1919	5,874 00		
Amount of Fund, March 31, 1920		81,184 41	
BOSTON ELEVATED SHARE, CAMBRIDGE BRIDGE			
Amount of Fund, March 31, 1919	$257,500 00		
Earnings each year are deducted from Sinking Fund requirement of Cambridge Bridge Loans			
Amount of Fund, March 31, 1920		257,500 00	
GENERAL			
Amount of Fund, March 31, 1919	$1,269,441 42		
Interest, 1919	58,712 49		
Appropriation for 1919	119,380 84		
	$1,447,534 75		
Bonds maturing in 1919	135,000 00		
Amount of Fund, March 31, 1920		1,312,534 75	
Amount carried forward			$3,602,076 21

COMMISSIONERS OF SINKING FUNDS

Amount brought forward			$3,602,076 21

Received

From City Treasury appropriation from 1919:			
Brookline Bridge	$333 33		
Cambridge Bridge	11,566 66		
Cambridge Bridge, Special	616 00		
Charles River Basin	5,400 00		
Commercial Avenue Bridge	666 66		
Harvard Bridge	4,180 00		
Hospital, Acts of 1895	5,625 00		
Metropolitan Park Assessment	1,012 00		
Park	25,666 67		
Playgrounds	2,090 00		
Improved Sewerage	8,778 00		
Separate System of Drainage	5,874 00		
General	119,380 84		
			$191,189 16

PUBLIC SERVICE ENTERPRISES

WATER DEPARTMENT—MAINTENANCE GENERAL

Expended

Personal Service A			
For Salaries of:			
Superintendent	$3,000 00		
Registrar and Clerk of Water Board	2,600 00		
Inspectors and clerks	21,984 01		
Labor, permanent and temporary	93,944 12		
Treasurer of Sinking Fund	200 00		
Service of City Treasurer in collection of water rates, etc.	1,500 00		
Services of City Solicitor	1,000 00		
		$124,228 13	
Service Other Than Personal B			
Printing and binding	$138 91		
Postage	754 10		
Transportation of persons	730 00		
Cartage and freight	266 28		
Hire of teams and auto trucks	7 84		
Light and power	208 69		
Rent, taxes, water	2,206 02		
Communication	464 91		
Motor vehicle repairs and care	718 16		
Motorless vehicle repairs	183 41		
Medical	7 00		
Blacksmith	397 78		
Amount carried forward	$6,083 10	$124,228 13	$3,793,265 37

PUBLIC SERVICE ENTERPRISES—Continued

WATER DEPARTMENT—MAINTENANCE GENERAL—Concluded

Amount brought forward	$6,083 10	$124,228 13	$3,793,265 37
Protective and preventive	50 00		
Fees, service of venires, etc.	129 00		
General plant	2,606 49		
Harness, etc., repairs	426 29		
Horseshoeing and clipping	807 69		
Cleaning main pipe	9,962 52		
Pitometer survey	10,000 00		
		30,065 09	
Equipment:			
Tools and instruments	$1,225 31		
Wearing apparel	52 92		
General plant	208 52		
		1,486 75	
Supplies:			
Office	$1,079 97		
Food and ice	1,086 17		
Fuel	408 57		
Forage and animal	1,343 63		
Laundry, cleaning, toilet	5 58		
Motor vehicle	4,462 39		
General plant	2,289 38		
		10,675 69	
Materials:			
Building	$87 71		
Water	32,079 47		
		$32,167 18	
Special Items:			
Damages	$1,819 72		
Serial Loans	20,500 00		
Interest	43,993 75		
Pensions	3,157 16		
Workingmen's compensation	56 60		
Abatements and refunds	1,170 38		
		70,697 61	
Incidental Expenditures:			
Inspection of plant	$2,504 75		
Leakage	200 00		
		2,704 75	
Total Water Dept., Maintenance General			272,025 20

WATER MAINTENANCE—RESERVOIRS

Personal Service:			
For labor as per payrolls	$21,095 35		
		$21,095 35	
Amount carried forward		$21,095 35	$4,065,290 57

PUBLIC SERVICE ENTERPRISES—Continued

WATER MAINTENANCE—RESERVOIRS—Concluded

Amount brought forward		$21,095 35	$4,065,290 57
Service Other Than Personal:			
Advertising and posting	$32 09		
Lighting streets, alleys and parks	9 20		
Rent, taxes, water	89 58		
Communication	120 38		
Motorless vehicle repairs	12 48		
Cleaning	2,039 12		
Veterinary	6 86		
Extermination of insects	2 00		
General plant	2,026 19		
Harness, etc., repairs	4 07		
Horseshoeing and clipping	148 90		
		4,490 87	
Equipment:			
Tools and instruments	$1 05		
Wearing apparel	8 82		
		9 87	
Supplies:			
Fuel	$60 89		
Forage and animal	370 45		
General Plant	550 00		
		981 34	
Total Water Maintenance, Reservoirs			26,577 43

WATER DEPARTMENT—PUMPING

Personal Service:			
For labor, as per payrolls	$19,864 79		
		$19,864 79	
Service Other Than Personal:			
Advertising and posting	$25 72		
Transportation of persons	40 00		
Cartage and freight	36 61		
Lighting streets, alleys and parks	151 38		
Communication	68 28		
Boiler inspector	5 00		
General plant	3,349 49		
Metal sashes, window, etc.	6,010 00		
		9,686 48	
Equipment:			
Tools and instruments	$109 83		
		109 83	
Amount carried forward		$29,661 10	$4,091,868 00

PUBLIC SERVICE ENTERPRISES—Concluded
WATER DEPARTMENT—PUMPING—Concluded

Amount brought forward		$29,661 10	$4,091,868 00
Supplies:			
Food and ice	$67 67		
Fuel	25,486 20		
Laundry, cleaning, toilet	26 95		
General plant	3,581 34		
		29,162 16	
Total Water Department Maintenance, Pumping			$58,823 26
Total Revenue Accounts			$4,150,691 26

SPECIAL FUND AND LOAN ACCOUNTS

GENERAL GOVERNMENT

MUNICIPAL BUILDING, CENTRAL SQUARE

Services of architect	$2,400 00	
		2,400 00

HEALTH AND SANITATION

ASH HOPPER

Services of inspector	$359 19	
		359 19

SEWER DEPARTMENT, CONSTRUCTION GENERAL

Personal Service:			
Employees		$51,381 28	
Service Other Than Personal, Material, Etc.:			
Advertising	$10 30		
Bricks	436 81		
Carpentry	32 34		
Cement	1,953 30		
Frames, grates and covers	724 42		
Fuel	74 11		
Hose	15 77		
Ice	9 46		
Lumber and milling	1,425 26		
Oil, gasoline, etc.	225 07		
Pipes and fittings	2,710 82		
Amount carried forward	$7,617 66	$51,381 28	$2,759 19

SEWER DEPARTMENT—CONSTRUCTION GENERAL—Concluded

Amount brought forward	$7,617 66	$51,381 28	$2,759 19
Piles	379 06		
Protection of tracks during sewer repairs	106 79		
Rent of Carson machine	127 40		
Repairs to hydrant	54 63		
Repairs to street	303 96		
Rubber boots, etc.	128 77		
Sand and gravel	1,741 16		
Steel rods	131 00		
Sharpening tools	159 50		
Tools and miscellaneous supplies	1,004 22		
Traps	136 22		
Stone	215 00		
Teaming, freight and express	30 15		
Teaming, as per payroll	593 50		
Use of truck	88 00		
		12,817 02	
			64,198 30

HIGHWAYS AND BRIDGES

ACORN STREET

Personal Service:

Employees		$155 47	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$35 00		
Fuel	18 45		
Stone	562 05		
Tar	170 52		
		786 02	
			941 49

ALLSTON STREET

Personal Service:

Employees		$853 22	
Service Other Than Personal, Materials, Etc.:			
Binder	$90 16		
Forage and animal	107 50		
Fuel	66 91		
Stone	1,409 90		
Tar	481 33		
		2,155 80	
			3,009 02
Amount carried forward			$70,908 00

HIGHWAYS AND BRIDGES—Continued

Amount brought forward			$70,908 00

APPLETON STREET

(Highland Street to Huron Avenue)

Personal Service:

Employees		$290 17	

Service Other Than Personal, Materials, Etc.:

Forage and animal	$52 50		
Fuel	47 07		
Roller repairs	1 22		
Stone	1,040 68		
Tar	647 88		
		1,789 35	
			2,079 52

ARLINGTON STREET

Personal Service:

Employees		$520 59	

Service Other Than Personal, Materials, Etc.:

Forage and animal	$80 00		
Fuel	98 93		
Steam roller repairs	1 62		
Stone	1,323 92		
Tar	646 80		
		2,151 27	
			2,671 86

BALDWIN STREET

Personal Service:

Employees		$321 21	

Service Other Than Personal, Material, Etc.:

Forage and animal	$57 50		
Fuel	64 32		
Hardware and tools	8 82		
Stone	1,305 86		
Tar	679 53		
		2,116 03	
			2,437 24

BRATTLE STREET

Personal Service:

Employees		$6,782 99	
Amount carried forward		$6,782 99	$78,096 62

HIGHWAYS AND BRIDGES—Continued

Amount brought forward		$6,782 99	$78,096 62
Service Other Than Personal, Materials, Etc.:			
Bitulithic pavement	$25,488 32		
Forage and animal	1,575 00		
Fuel	174 71		
Hardware and tools	174 05		
Lighting	10 29		
Stone	17 04		
		27,439 41	
			34,222 40

BURLEIGH STREET

Personal Service:			
Employees		$180 50	
Service Other Than Personal, Materials, Etc.:			
Cement	$683 67		
Freight	9 00		
Lighting	112 15		
Hardware and tools	4 75		
		809 57	
			990 07

CAMERON AVENUE

Personal Service:			
Employees		$428 54	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$90 00		
Fuel	21 41		
Steam roller repairs	17 15		
Stone	433 52		
Tar	326 93		
		889 01	
			1,317 55

CHARLES RIVER PARKWAY

Personal Service:			
Employees		$1,716 67	
Service Other Than Personal, Materials, Etc.:			
Asphalt	$163 41		
Binder	50 71		
Bitulithic	8,101 17		
Crushed stone	108 58		
Amount carried forward	$8,423 87	$1,716 67	$114,626 64

HIGHWAYS AND BRIDGES—Continued

CHARLES RIVER PARKWAY—Continued

Amount brought forward	$8,423 87	$1,716 67	$114,626 64
Forage and animal	355 00		
Frames and grates	54 88		
Fuel	49 64		
Hardware, tools, etc.	54 99		
Lighting	3 97		
		8,942 35	
			10,659 02

CLAY STREET

Personal Service:

Employees		$422 46	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$125 00		
Fuel	20 98		
Steam roller repairs	1 47		
Stone	1,447 48		
Tar	820 84		
		2,415 77	
			2,838 23

COLUMBIA STREET

Personal Service:

Employees		$73 63	
Service Other Than Personal, Materials, Etc.:			
Stone	$644 26		
Tar	242 26		
		886 52	
			960 15

DANA STREET

Personal Service:

Employees		$200 78	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$5 00		
Fuel	17 16		
Oil	13 13		
Stone	702 38		
Tar	329 28		
		1,066 95	
			1,267 73
Amount carried forward			$130,351 77

HIGHWAYS AND BRIDGES—Continued

Amount brought forward			$130,351 77

EIGHTH STREET

Personal Service:			
Employees		$156 00	
Service Other Than Personal, Materials, Etc.:			
Crushed stone	$753 32		
Forage and animal	12 50		
Fuel	76 55		
Tar	522 98		
		1,365 35	
			1,521 35

FAYERWEATHER STREET

Personal Service:			
Employees		$123 00	
Service Other Than Personal, Materials, Etc.:			
Freight	$25 00		
Fuel	54 00		
Lighting	46 55		
Sand	67 05		
Sewer material	122 30		
Traps	16 66		
		331 56	
			454 56

FIFTH STREET

(Gore to Winter)

Personal Service:			
Employees		$352 93	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$25 00		
Fuel	16 00		
Stone	937 89		
Tar	518 03		
		1,496 92	
			1,849 85

FOURTH STREET

(Winter to Bridge)

Service Other Than Personal, Materials, Etc.:			
Binder		$84 52	
			84 52
Amount carried forward			$134,262 05

HIGHWAYS AND BRIDGES—Continued

Amount brought forward			$134,262 05

FRANKLIN STREET

Personal Service:			
Employees		$931 94	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$232 50		
Fuel	93 02		
Hardware and tools	16 62		
Steam roller repairs	35 50		
Stone	2,837 43		
Tar and binder	1,732 53		
		4,947 60	
			5,879 54

GIBSON STREET

Personal Service:			
Employees		$195 50	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$50 00		
Fuel	32 85		
Stone	731 25		
Tar	215 60		
		1,029 70	
			1,225 20

GORE STREET

Personal Service:			
Employees		$4,687 37	
Service Other Than Personal, Materials, Etc.:			
Bitulithic pavement	$6,440 58		
Binder	193 79		
Hardware	11 00		
Lighting	178 75		
Lime	3 53		
Lumber	1 28		
		6,828 93	
			11,516 30

GRANVILLE ROAD

Personal Service:			
Employees		$53 75	
			53 75
Amount carried forward			$152,936 84

HIGHWAYS AND BRIDGES—Continued

Amount carried forward			$152,936 84

HAMPSHIRE STREET

Personal Service:			
Employees		$7,228 97	
Service Other Than Personal, Materials, Etc.:			
Advertising	$10 29		
Cement	1,751 78		
Cutting blocks	1,217 87		
Forage and animal	692 50		
Gravel and freight	159 67		
Hardware and tools	91 00		
Lighting	301 05		
Repairs to mixer	148 50		
Sand	491 96		
Stone	436 85		
		5,301 47	
			12,530 44

HIGHLAND STREET

Personal Service:			
Employees		$836 18	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$127 50		
Fuel	47 90		
Stone	1,152 31		
Tar	539 00		
		1,866 71	
			2,702 89

HURON AVENUE

Personal Service:			
Employees		$1,007 17	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$187 50		
Fuel	44 94		
Stone	766 70		
Tar	336 04		
		1,335 18	
			2,342 35

IRVING STREET

Personal Service:			
Employees		$287 50	
Amount carried forward		$287 50	$170,512 52

HIGHWAYS AND BRIDGES—Continued

Amount brought forward		$287 50	$170,512 52

IRVING STREET—Concluded

Service Other Than Personal, Materials, Etc.:			
Forage and animal	$152 50		
Fuel	44 47		
Stone	1,131 67		
Tarvia	465 70		
		1,794 34	
			2,081 84

LEONARD AVENUE

Personal Service:			
Employees		$123 76	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$5 00		
Fuel	28 47		
Stone	964 04		
Tar	404 42		
		1,401 93	
			1,525 69

MAPLE AVENUE

Personal Service:			
Employees		$266 64	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$30 00		
Fuel	60 14		
Roller oil	13 13		
Stone	1,370 06		
Tar	682 08		
		2,155 41	
			2,422 05

MASSACHUSETTS AVENUE

Personal Service:			
Employees		$5,957 74	
Service Other Than Personal, Materials, Etc.:			
Binder	$1,463 63		
Bitulithic surface	15,150 65		
Cutting blocks	375 53		
Forage and animal	455 00		
Hardware and tools	32 83		
Lighting	255 19		
Sand	24 49		
Stone	60 71		
Wood blocks	3,944 84		
		21,762 87	
			27,720 61
Amount carried forward			$204,262 71

HIGHWAYS AND BRIDGES—Continued

Amount brought forward			$204,262 71

MOUNT AUBURN STREET

Personal Service:			
Employees		$6,810 53	
Service Other Than Personal, Material, Etc.:			
Binder	$1,103 90		
Bitulithic	19,759 10		
Forage and animal	1,282 50		
Fuel	108 62		
Hardware and tools	243 71		
Lighting	116 33		
		22,614 16	
			29,424 69

NEWTON STREET

Personal Service:			
Employees		$116 38	
Service Other Than Personal, Material, Etc.:			
Forage and animal	$10 00		
Fuel	19 13		
Stone	409 01		
Tar	189 14		
		627 28	
			743 66

OTIS STREET

Personal Service:			
Employees		$523 92	
Service Other Than Personal, Material, Etc.:			
Binder	$524 05		
Forage and animal	87 50		
Fuel	79 51		
Hardware, tools, etc.	24 62		
Stone	1,796 33		
Tar	737 08		
		3,249 09	
			3,773 01

OXFORD STREET

Personal Service:			
Employees		$2,653 58	
Amount carried forward		$2,653 58	$238,204 07

HIGHWAYS AND BRIDGES—Continued

OXFORD STREET—Concluded

Amount brought forward		$2,653 58	$238,204 07
Service Other Than Personal, Material, Etc.:			
Binder	$1,783 48		
Bitulithic	25,415 76		
Forage and animal	325 00		
Fuel	114 82		
Hardware, tools, etc.	68 06		
Lighting	105 10		
		27,812 22	
			30,465 80

PALERMO STREET

Personal Service:			
Employees		$149 71	
Service Other Than Personal, Material, Etc.:			
Crushed stone	$325 64		
Fuel	33 14		
Tar	269 50		
		628 28	
			777 99

PLYMOUTH STREET

Personal Service:			
Employees		$321 23	
Service Other Than Personal, Material, Etc.:			
Binder	$1,046 97		
Forage and animal	35 00		
Fuel	37 98		
Stone	1,394 00		
		2,513 95	
			2,835 18

PORTLAND STREET

Personal Service:			
Employees		$9,952 94	
Service Other Than Personal, Material, Etc.:			
Cement	$3,744 37		
Cutting blocks	3,002 18		
Forage and animal	1,042 50		
Freight	381 48		
Hardware, tools, etc.	181 23		
Lighting	250 38		
Lumber	46 58		
Repairs to mixer	92 09		
Sand	571 34		
Stone	1,455 20		
		10,767 35	
			20,720 29
Amount carried forward			$293,003 33

HIGHWAY AND BRIDGES—Continued

PROSPECT STREET

Amount brought forward			$293,003 33
Personal Service:			
Employees		$3,615 29	
Service Other Than Personal, Material, Etc.:			
Binder	$550 51		
Bitulithic	5,925 98		
Cement	341 83		
Cutting blocks	272 46		
Forage and animal	242 50		
Freight	17 77		
Gravel and sand	149 12		
Hardware, tools, etc.	54 25		
Lighting	206 68		
Patch	31 80		
Repairs to mixer	54 91		
Stone	20 37		
		7,868 18	
			11,483 47

PUTNAM SQUARE

Personal Service:			
Employees		$3,804 81	
Service Other Than Personal, Material, Etc.:			
Blocks	$3,428 22		
Cement	794 07		
Forage and animal	552 50		
Fuel	18 28		
Hardware and tools	91 73		
Inspection of blocks	25 89		
Joint	30 24		
Lighting	80 55		
Oil and gasoline	9 36		
Repairs to mixer	47 61		
Sewer work	7 82		
Sand	132 28		
Stone	235 69		
		5,454 24	
			9,259 05

QUINCY SQUARE

Personal Service:			
Employees		$3,167 95	
Amount carried forward		$3,167 95	$313,745 85

HIGHWAYS AND BRIDGES—Continued

QUINCY SQUARE

Amount brought forward		$3,167 95	$313,745 85
Service Other Than Personal, Material, Etc.:			
Advertising	$9 31		
Blocks	3,155 75		
Inspection of blocks	25 89		
Cement	687 79		
Forage and animal	397 50		
Freight	25 80		
Fuel	16 00		
Joint	30 24		
Hardware, tools, etc.	64 76		
Lighting	92 71		
Lumber	5 00		
Repairs to mixer	82 59		
Sand	166 42		
Stone	227 24		
		4,987 00	
			8,154 95

SCOTT STREET

Personal Service:			
Employees		$780 94	
Service Other Than Personal, Material, Etc.:			
Forage and animal	$90 00		
Fuel	29 40		
Stone	1,509 37		
Tar	900 95		
		2,529 72	
			3,310 66

SIXTH STREET

Personal Service:			
Employees		$131 02	
Service Other Than Personal, Material, Etc.:			
Forage and animal	$12 50		
Fuel	15 41		
Stone	397 84		
		425 75	
			556 77

SPRING STREET

Personal Service:			
Employees		$651 34	
Amount carried forward		$651 34	$325,768 23

HIGHWAYS AND BRIDGES—Continued

SPRING STREET—Concluded

Amount brought forward		$651 34	$325,768 23
Service Other Than Personal, Material, Etc.:			
Binder	$1,286 35		
Forage and animal	65 00		
Fuel	49 25		
Stone	2,344 00		
		3,744 60	
			4,395 94

THORNDIKE STREET

Personal Service:			
Employees		$865 47	
Service Other Than Personal, Material, Etc.:			
Binder	$1,972 24		
Forage and animal	77 50		
Fuel	64 19		
Hardware, tools, etc.	24 63		
Stone	3,652 91		
Tar	75 85		
		5,867 32	
			6,732 79

UPLAND ROAD

Personal Service:			
Employees		$773 10	
Service Other Than Personal, Materials, Etc.:			
Forage and animal	$77 50		
Fuel	34 57		
Sand	16 09		
Stone	1,453 84		
Tar	1,322 02		
		2,904 02	
			3,677 12

WASHINGTON STREET

Personal Service:			
Employees		$1,321 31	
Service Other Than Personal, Material, Etc.:			
Binder	$2,601 75		
Forage and animal	50 00		
Fuel	73 07		
Lighting	21 66		
Roller oil	13 13		
Stone	3,976 49		
		6,736 10	
			8,057 41
Amount carried forward			$348,631 49

HIGHWAYS AND BRIDGES—Continued

Amount brought forward			$348,631 49

WESTERN AVENUE

Personal Service:

Employees		$12,228 56	
Service Other Than Personal, Material, Etc.:			
Cement	$1,808 26		
Crushed stone	1,283 11		
Forage and animal	780 00		
Freight	256 72		
Hardware	250 08		
Lighting	49 00		
Sand	1,522 15		
Use of mixer	88 20		
		6,037 52	
			18,266 08

WINDSOR STREET

Personal Service:

Employees		$71 63	
Service Other Than Personal, Material, Etc.:			
Fuel	$29 00		
Stone	564 85		
Tar	236 26		
		830 11	
			901 74

EDGESTONES AND SIDEWALKS

Personal Service:

Employees		$13,839 28	
Service Other Than Personal, Material, Etc.:			
Allowance on granolithic walks	$1,562 11		
Bricks	3,333 36		
Edgestone	6,023 36		
Forage and animal	1,130 00		
Freight	160 15		
Gravel	754 46		
Hardware, tools, etc.	210 11		
Lighting	278 33		
Lumber	18 37		
Teaming	30 00		
		13,500 25	
			27,339 53
Amount carried forward			$395,138 84

HIGHWAYS AND BRIDGES—Concluded

Amount brought forward		$395,138 84

THIRD, SIXTH AND COMMERCIAL AVENUE BRIDGES

Labor	$492 97	
Lumber	419 26	
Machine work and repairs to bridge	151 61	
Tools	13 72	
		1,077 56

HARVARD BRIDGE

Contract work	$42,290 54	
Miscellaneous repairs	399 77	
		42,690 31

CHARITIES

CITY HOSPITAL

Advertising	$59 90	
		59 90

EDUCATION

ADDITION TO HIGH AND LATIN SCHOOL

Labor	$418 00	
Advertising	13 97	
Architect fees	1,417 61	
Blackboards	337 50	
Cleaning	62 10	
Furniture	1,544 53	
Services of engineer	435 10	
Shades	315 40	
Contracts and material	16,108 40	
		20,652 61

MORSE SCHOOL

Advertising	$8 82	
Architect fees	501 15	
Contract for alterations and addition	16,705 00	
Furniture	1,115 47	
Installing electric fixtures	195 51	
Insurance	100 00	
Hardware	135 00	
Window shades	67 13	
		18,828 08
Amount carried forward		$478,447 30

Amount brought forward		$478,447 30

UNCLASSIFIED

LAND FOR PLAYGROUNDS

Taking of land, Flagg Street, Ward 8	$4,879 00	
Examination of title	110 00	
Recording deeds	1 30	
		4,990 30

BATH HOUSE, MAGAZINE BEACH

Advertising	$5 52	
Carpentry	127 20	
Concrete work	551 39	
Electric wiring and fixtures	193 06	
		877 26

PUBLIC SERVICE ENTERPRISE

DETECTOR METERS

Meters	$261 26	
Meter boxes	200 00	
		461 26
Total, Special Fund and Loan Accounts		$484,776 12

REFUND OF TAXES

1919	$4,967 94	
1918	1,138 00	
1917	413 45	
1916	77 86	
		$6,597 25

REFUND OF STREET SPRINKLING ASSESSMENTS

1917	$1 00	
1916	1 36	
		2 36

REFUND MOTH EXTERMINATION BILLS

1916		31

REFUND EDGESTONE AND SIDEWALK ASSESSMENT

1916		39 34
Amount carried forward		$6,639 26

Amount brought forward		$6,639 26

REFUND MISCELLANEOUS

Interest	$111 07	
Costs	77 82	
		188 89

REFUND ON MINORS LICENSE

Police Department	6 00

REFUND ON DEPARTMENT BILLS

Refund on Park bills	75 00
Refund on Cemetery bills	299 41

TAX LIEN ACCOUNT

To return to sundry persons	8,177 28

PREMIUM ACCOUNTS

Amount paid for certifying and preparing bonds	725 00

TRUSTEES OF CEMETERY FUND AND DEEDS IN TRUST

Paid to Treasurer payment of Cemetery Funds	3,360 25

MATURED FUNDED WATER LOANS

Amount paid for water loans maturing 1919–1920	23,000 00

MATURED FUNDED CITY LOANS

Loans, Schoolhouse	$55,000 00	
Loans, Street	80,000 00	
Loans, Harvard Bridge	9,000 00	
		144,000 00

TEMPORARY LOANS, TAXES, 1919

Temporary Loans	2,050,000 00
Amount carried forward	$2,236,471 09

Amount brought forward		$2,236,471 09

STATE, COUNTY AND METROPOLITAN TAXES, AND SOLDIERS' EXEMPTION

State Tax	$316,580 00	
Metropolitan Park	78,766 14	
Fire Prevention	1,918 61	
Alewife Brook	4,579 76	
Charles River Basin	13,801 44	
Charles River Bridge	25,820 04	
Smoke Nuisance	587 69	
Metropolitan Sewer	133,430 27	
Non-resident Bank Tax	4,450 80	
Soldiers' Exemption	661 74	
State Tax, Service Men	18,994 80	
Boston Elevated Railway Tax	392,185 34	
County Tax	162,646 36	
		$1,154,422 99

SMITH-HUGHES FUND

Amount paid by Commonwealth of Massachusetts	604 23
Total, Other General Items	$3,391,498 31

SUMMARY OF EXPENDITURES

REVENUE APPROPRIATION PAYMENTS	$4,150,691 26
NON-REVENUE APPROPRIATION PAYMENTS	484,776 12
OTHER GENERAL ITEMS	3,391,498 31
	$8,026,965 69

STATEMENT SHOWING AUDITOR'S AND TREASURER'S EXPENDITURES AND BALANCES for Year, Apr. 1, 1919 to Mch. 31, 1920

Accounts		Temporary Loans	Balances	Receipts	Appropriations and Additions	Transfers To	Transfers From	Total Expenditures	Cash Expended	Balances
City Council	A				$7,500.00	$6.39		$7,506.39	$7,506.39	
	B				4,500.00	5,288.66		9,788.66	9,788.66	
Clerk of Committees	A				4,922.00	131.29		5,053.29	5,053.29	
	B				145.00	84.43		229.43	229.43	
	D				50.00	40.56		90.56	90.56	
	F7				450.00			450.00	450.00	
Executive Department	A				9,268.00	287.00		9,555.00	9,555.00	
	B				1,055.00	709.69		1,764.69	1,764.69	
	D				500.00	476.90		976.90	976.90	
	G				1,200.00	179.51		1,379.51	1,379.51	
Auditing	A				7,466.00	671.73		8,137.73	8,137.73	
	B				175.00		25.24	149.76	149.76	
	D				1,050.00	3,898.89		4,948.89	4,948.89	
Auditing Special						653.72		653.72	653.72	
Treasurer and Collector	A				17,948.00	634.21		18,582.21	18,582.21	
	B				6,029.00	1,200.00		7,229.00	7,229.00	
	C				75.00		1.50	73.50	73.50	
	D				1,350.00	212.01		1,562.01	1,562.01	
Administration Skg. Funds	A				325.00	175.00		500.00	500.00	
	B				50.00		6.00	44.00	44.00	
Assessors	A				17,738.00	760.50		18,498.50	18,498.50	
	B				645.00	161.49		806.49	806.49	
	C				100.00	138.34		238.34	238.34	
	D				550.00	68.12		618.12	618.12	
Police Listing Board					2,220.00	178.19		2,378.19	2,378.19	
License Commission	A				1,000.00	1,934.01		2,934.01	2,934.01	
	B					101.28		101.28	101.28	
	C					191.10		191.10	191.10	
	D				1,000.00		203.86	796.14	796.14	
City Clerk	A				10,238.00		110.34	10,127.66	10,127.66	
	B				1,257.00		20.33	1,236.67	1,236.67	
	C					30.30		30.30	30.30	
	D				550.00	150.37		700.37	700.37	
Record of Enlisted Men					200.00		61.65	138.35	138.35	
Inspection of Junk Shops and Garages					1,200.00	215.15		1,415.15	1,415.15	
City Messenger	A				2,840.00		311.61	2,528.39	2,528.39	
	B				240.00	47.32		287.32	287.32	
	D				100.00	52.30		152.30	152.30	
Law Department	A				4,384.00	104.50		4,488.50	4,488.50	
	B				1,370.00	1,305.76		2,675.76	2,675.76	
	D				175.00	37.29		212.29	212.29	
Carried forward					$109;845.00	$20,126.01	$740.53	$129,230.48	$129,230.48	

STATEMENT SHOWING AUDITOR'S AND TREASURER'S EXPENDITURES AND BALANCES for Year, Apr. 1, 1919 to Mch. 31, 1920

Accounts		Temporray Loans	Balances	Receipts	Appropriations and Additions	Transfers To	Transfers From	Total Expenditures	Cash Expended	Balances
Forward					$109,845.00	$20,126.01	$740.53	$129,230.48	$129,230.48	
Election Expenses	A				6,000.00	380.90		6,380.90	6,380.90	
	B				1,615.00	37.18		1,652.18	1,652.18	
	D				425.00	810.02		1,235.02	1,235.02	
Registrars of Voters	A				4,525.00	165.93		4,690.93	4,690.93	
	B				1,480.00	270.78		1,750.78	1,750.78	
	D				106.00	53.77		159.77	159.77	
	F7				494.00			494.00	494.00	
Election Exp. Polling Pls.	A				500.00	123.50		623.50	623.50	
	B				1,750.00	136.47		1,886.47	1,886.47	
	C					700.00	700.00			
	D				25.00		8.84	16.16	16.16	
Engineering Department	A				11,391.50		569.87	10,821.63	10,821.63	
	B				305.00	230.50		535.50	535.50	
	D				100.00	222.10		322.10	322.10	
Assessors' Plans					200.00			200.00	200.00	
Inspection of Buildings	A				9,728.00		937.40	8,790.60	8,790.60	
	B				554.00	108.08		662.08	662.08	
	D				275.00	350.90		625.90	625.90	
	F7				1,380.00		245.00	1,135.00	1,135.00	
Civil Service Registration	A				400.00			400.00	400.00	
	D				25.00		3.09	21.91	21.91	
Municipal Buildings	A				17,719.00		406.70	17,312.30	17,312.30	
	B				3,700.00	931.92		4,631.92	4,631.92	
	C				1,700.00	773.46		2,473.46	2,473.46	
	D				5,750.00	1,508.65		7,258.65	7,258.65	
Police Department	A				272,500.00	8,010.88		280,510.88	280,510.88	
	B				2,240.00	1,196.59		3,436.59	3,436.59	
	C				1,600.00	1,526.49		3,126.49	3,126.49	
	D				1,800.00	363.38		2,163.38	2,163.38	
	F7				11,118.00		1,219.60	9,898.40	9,898.40	
Fire Department	A				224,550.00	3,673.09		228,223.09	228,223.09	
	B				3,520.00	2,186.24		5,706.24	5,706.24	
	C				20,200.00		925.89	19,274.11	19,274.11	
	D				11,900.00	6,365.67		18,265.67	18,265.67	
	F7				24,986.00		201.05	24,784.95	24,784.95	
Electrical Department	A				24,304.04	514.25		24,818.29	24,818.29	
	B				596.00	303.32		899.32	899.32	
	C				1,075.00		322.21	752.79	752.79	
	D				2,040.00	313.89		2,353.89	2,353.89	
Sealer of W. and Measures	A				6,100.00	225.00	1.00	6,324.00	6,324.00	
	B				435.00	163.39		598.39	598.39	
	C				725.00	48.06		773.06	773.06	
	D				215.00	155.19		370.19	370.19	
Carried forward					$789,896.54	$51,975.61	$6,281.18	$835,590.97	$835,590.97	

STATEMENT SHOWING AUDITOR'S AND TREASURER'S EXPENDITURES AND BALANCES for Year, Apr. 1, 1919, to Mar. 31, 1920

Accounts		Temporary Loans	Balances	Receipts	Appropriations and Additions	Transfers To	Transfers From	Total Expenditures	Cash Expended	Balances
Brought forward					$789,896.54	$51,975.61	$6,281.18	$835,590.97	$835,590.97	
PARK FORESTRY	A				11,300.00		1,671.51	9,628.49	9,628.49	
	B				175.00	257.77		432.77	432.77	
	C				100.00		100.00			
	D				775.00		199.17	575.83	575.83	
	E					1.25		1.25	1.25	
GAME WARDEN					50.00			50.00	50.00	
EMERGENCY INFLUENZA						60.90		60.90	60.90	
HEALTH GENERAL	A			$179.78	31,256.00		584.00	30,851.78	30,851.78	
	B			5,458.15	11,870.00		1,023.33	16,304.82	16,304.82	
	D			485.85	1,130.00	450.00		2,065.85	2,065.85	
	F7				600.00			600.00	600.00	
HEALTH — TUBER. HOSP.	A				18,824.00	459.45		19,283.45	19,283.45	
	B				3,765.00	108.53		3,873.53	3,873.53	
	C				250.00		102.17	147.83	147.83	
	D			2,676.32	29,845.00		38.54	32,482.78	32,482.78	
INSPECTION OF ANIMALS	A				1,200.00	250.00		1,450.00	1,450.00	
	B				600.00			600.00	600.00	
	D				400.00		21.57	378.43	378.43	
INSPECTION MILK & VINEGAR	A				2,600.00	I5.32		2,615.32	2,615.32	
	B				120.00	29.35		149.35	149.35	
	C				600.00		40.95	559.05	559.05	
	D				632.00		7.82	624.18	624.18	
SCHOOL DENTIST	A				1,416.00	27.20		1,443.20	1,443.20	
	D				80.00		30.69	49.31	49.31	
SUPPRESSION MOSQUITOES			Inc. Tax	1,000.00	3,000.00	226.93		4,226.93	4,226.93	
SEWER MAINTENANCE	A				15,000.00	1,416.04		16,416.04	16,416.04	
	B				2,040.00		461.39	1,578.61	1,578.61	
	C				95.00	505.83		600.83	600.83	
	D				2,695.00	535.80		3,230.80	3,230.80	
	E				350.00	44.63		394.63	394.63	
	F7				2,263.56	118.77		2,382.33	2,382.33	
	F11					51.42		51.42	51.42	
STREET — OFFAL & SANITARY	A				147,175.00	23,134.68		170,309.68	170,309.68	
	B				970.00	507.85		1,477.85	1,447.85	
	C				300.00		88.39	211.61	211.61	
	D				3,215.00		1,041.41	2,173.59	2,173.59	
	F7				1,756.04	101.60		1,857.64	1,857.64	
	F11					1,525.33		1,525.33	1,525.33	
HURON AVENUE BRIDGE					1,200.00	127.88		1,327.88	1,327.88	
STREET MAINT'ANCE	A				125,928.00	23,405.16		149,333.16	149,333.16	
	B				10,080.00	1,069.21		11,149.21	11,149.21	
	C				4,605.00	65.64		4,670.64	4,670.64	
	D				4,575.00	1,614.57		6,189.57	6,189.57	
Carried forward										

STATEMENT SHOWING AUDITOR'S AND TREASURER'S EXPENDITURES AND BALANCES for Year, Apr. 1, 1919, to Mar. 31, 1920

Accounts		Temporary Loans	Balances	Receipts	Appropriations and Additions	Transfers To	Transfers From	Total Expenditures	Cash Expended	Balances
Forward				$9,800.10	$1,232,732.14	$108,086.72	$11,692.12	$1,338,926.84	$1,338,296.84	
Street Maintenance	E				31,500.00		12,572.46	18,927.54	18,927.54	
	F7				9,871.60	642.91		10,514.51	10,514.51	
	F11					1,743.89		1,743.89	1,743.89	
	F12				6,000.00		458.29	5,541.71	5,541.71	
St. Maintenance — Stable	A				44,468.00	1,832.85		46,300.85	46,300.85	
	B				1,005.00	90.64		1,095.64	1,095.64	
	C				300.00		283.09	16.91	16.91	
	D				35,050.00	422.72		35,472.72	35,472.72	
	E				25.00		25.00			
	F11					25.07		25.07	25.07	
Boston and Camb. Bridges	A				15,938.00		681.63	15,256.37	15,256.37	
	B				5,950.00	2,641.19		8,591.19	8,591.19	
	D				350.00	47.09		397.09	397.09	
	E				2,000.00	356.50		2,356.50	2,356.50	
	F7				250.00			250.00	250.00	
Street Lighting	B			7,735.86	70,030.00			77,765.86	77,765.86	
Overseers Poor — C. Home	A				14,284.80	551.21		14,836.01	14,836.01	
	B				2,456.00		569.28	1,886.72	1,886.72	
	C				1,600.00	228.30		1,828.30	1,828.30	
	D				18,675.00	1,014.04		19,689.04	19,689.04	
	E				90.00		40.77	49.23	49.23	
	F9				500.00	108.75		608.75	608.75	
" " Outside Aid	A				10,615.00	183.24		10,798.24	10,798.24	
	B				4,315.00		326.13	3,988.87	3,988.87	
	C				550.00	24.55		574.55	574.55	
	D				3,425.00	306.07		3,731.07	3,731.07	
	F9			4,366.81	45,000.00	1,487.59		50,854.40	50,854.40	
	F10			23,745.67	40,000.00			63,745.67	63,745.67	
Soldiers' Benefits	A				4,584.00	951.32		5,535.32	5,535.32	
	B				740.00	604.31		1,344.31	1,344.31	
	C				20.00	239.85		259.85	259.85	
	D				235.00	114.98		349.98	349.98	
	F7				350.00			350.00	350.00	
	F8		$24,945.04	2,109.07	33,000.00		1,943.09	58,111.02	58,111.02	
	G				150.00	13.38		163.38	163.38	
Municipal Hospital	A				25,207.00		298.69	24,908.31	24,908.31	
	B			649.63	4,859.00		108.50	5,400.13	5,400.13	
	C				915.00		98.63	816.37	816.37	
	D			8,408.09	22,860.00		383.08	30,885.01	30,885.01	
School Salaries and Exp.	$82,237.33		14,111.13	23,537.99	854,239.46			974,125.91	936,898.28	$37,227.63
Thorndike School Baths					800.00	359.46		1,159.46	1,159.46	
Haggerty School Baths					500.00	85.00		585.00	585.00	
Carried forward	$82,237.33		$39,056.17	$80,353.22	$2,545,440.00	$122,161.63	$29,480.76	$2,839,767.59	$2,802,539.96	$37,227.63

STATEMENT SHOWING AUDITOR'S AND TREASURER'S EXPENDITURES AND BALANCES For Year, Apr. 1, 1919 to Mch. 31, 1920

Accounts		Temporary Loans	Balances	Revenue Reappropriated	Appropriations and Additions	Transfers To	Transfers From	Total Expenditures	Cash Expended	Balances
Forward		$82,237.33	$39,056.17	$82,426.68	$2,765,693.36	$228,631.62	$196,304.89	$3,001,740.27	$2,963,712.64	$38,027.63
CEMETERY	A			2,500.00	29,000.00	2,967.49		34,467.49	34,467.49	
	B				653.00	50.31		703.31	703.31	
	C				1,150.00		125.85	1,024.15	1,024.15	
	D				1,560.00	962.90		2,522.90	2,522.90	
	E				1,450.00		395.19	1,054.81	1,054.81	
	F7				1,093.56			1,093.56	1,093.56	
CEMETERY GRADING					3,000.00		505.12	2,494.88	2,494.88	
PUBLIC MARKET				2,223.15			545.09	1,678.06	1,678.06	
SINKING FUNDS					199,513.00		8,323.84	191,189.16	191,189.16	
SERIAL LOANS					229,650.00		28,450.00	201,200.00	201,200.00	
INTEREST					390,086.75	2,037.66		392,124.41	392,124.41	
		$82,237.33	$39,056.17	$87,149.83	$3,622,849.67	$234,649.98	$234,649.98	$3,831,293.00	$3,793,265.37	$38,027.63
WATER MAINT. GENERAL	A			6,440.77	125,748.00			132,188.77	124,288.13	7,960.64
	B			1,940.09	28,125.00			30,065.09	30,065.09	
	C			261.75	1,225.00			1,486.75	1,486.75	
	D			4,075.69	6,600.00			10,675.69	10,675.69	
	E			2,067.18	30,100.00			32,167.18	32,167.18	
WATER MAINT.										
Damages					5,000.00		3,180.28	1,819.72	1,819.72	
Serial Loans					20,500.00			20,500.00	20,500.00	
Interest				632.50	43,361.25			43,993.75	43,993.75	
Pensions					3,183.12		25.96	3,157.16	3,157.16	
Workingmen's Comp.					300.00		243.40	56.60	56.60	
Incidental Expenditures				504.75	2,200.00			2,704.75	2,704.75	
Refunds					5,500.00		4,329.62	1,170.38	1,170.38	
Reservoirs	A				23,429.00		2,333.65	21,095.35	21,095 35	
	B			2,215.87	2,275.00			4,490.87	4,490.87	
	C				95.00		85.13	9.87	9.87	
	D				1,410.00		428.66	981.34	981.34	
Pumping	A			1,144.79	18,720.00			19,864.79	19,864.79	
	B		6,010.00	3,160.48	516.00			9,686.48	9,686.48	
	C				240.00		130.17	109.83	109.83	
	D				35,125.00		5,962.84	29,162.16	29,162.16	
			$6,010.00	$22,443.87	$353,652.37		$16,719.71	$365,386.53	$357,425.89	$7,960.64

STATEMENT SHOWING AUDITOR'S AND TREASURER'S EXPENDITURES AND BALANCES for Year, Apr. 1, 1919, to Mch. 31, 1920

Accounts	Temporary Loans	Balances	Receipts	Appropriations and Additions	Transfers To	Transfers From	Total Expenditures	Cash Expended	Balances
Forward	$82,237.33	$39,056.17	$80,353.22	$2,545,440.00	$122,161.63	$29,480.76	$2,839,767.59	$2,802,539.96	$37,227.63
Sh'r Baths, Roberts Sch'l				1,350.00	187.82		1,537.82	1,537.82	
Library A				26,188.00	812.74		27,000.74	27,000.74	
B				5,925.00		9.58	5,915.42	5,915.42	
C				615.00	588.63		1,203.63	1,203.63	
D				8,725.00	289.61		9,014.61	9,014.61	
Park Maintenance A				36,000.00	4,956.79		40,956.79	40,956.79	
B				7,496.00	1,937.47		9,433.47	9,433.47	
C				1,400.00	805.59		2,205.59	2,205.59	
D				3,175.00	2,796.52		5,971.52	5,971.52	
E				2,600.00		834.41	1,765.59	1,765.59	
F7				854.36	165.41		1,019.77	1,019.77	
F12				1,225.00		1,225.00			
Sand at Magazine Beach				1,200.00		29.05	1,170.95	1,170.95	
Flag Staff at Ft. Wash.			400.00			400.00			
Rep'r's to Sh'l'r.Camb.Fld.			600.00			600.00			
Temp. B.House, Jerry's Pit				300.00		123.37	176.63	176.63	
Playgrounds Maint.				4,500.00		80.38	4,419.62	4,419.62	
Tennis Courts				1,000.00	12.63		1,012.63	1,012.63	
Ward 8 Playground				1,000.00	428.07		1,428.07	1,428.07	
Reserve Fund			749.11	75,000.00	71,636.92	147,386.03			
Postage and Stationery				2,000.00		1,761.96	238.04	238.04	
Workingmen's Comp.				500.00			500.00	500.00	
Dam. to Pers's & Property				5,000.00	4,751.37		9,751.37	9,751.37	
Planning Board				1,200.00		22.89	1,177.11	1,177.11	
School Teachers' Pens's and Annuities				9,300.00		350.00	8,950.00	8,950.00	
Food Conservation				500.00		441.54	58.46	58.46	
Telephone Exchange			324.3	2,000.00		2,000.00	324.35	324.35	
Food Products				200.00		107.96	92.04	92.04	
Sale of Federal Food					10,000.00	10,000.00			
Commission War History					200.00	200.00			
Welcome Ret'n'g Soldiers'				12,000.00	2,607.85		14,607.85	14,607.85	
Bureau of Emp. Soldiers'				2,000.00	2,728.54		4,728.54	4,728.54	
Amer'nizat'n of For'n Born				3,000.00		1,251.96	1,748.04	1,748.04	
Post 30 G. A. R.					300.00		300.00	300.00	
H'dqu'rts for Amer. Legion					509.10		509.10	509.10	
Monum'nt, Span. War Lot				800.00			800.00		800.00
Memorial Day				1,400.00			1,400.00	1,400.00	
Celeb. Independence Day				1,500.00	565.43		2,065.43	2,065.43	
" Labor Day				300.00	8.42		308.42	308.42	
Sundry Celebrations					181.08		181.08	181.08	
Carried forward	$82,237.33	$39,056.17	$82,426.68	$2,765,693.36	$228,631.62	$196,304.89	$3,001,740.27	$2,963,712.64	$38,027.63

STATEMENT SHOWING AUDITOR'S AND TREASURER'S EXPENDITURES AND BALANCES for Year Apr. 1, 1919, to Mar. 31, 1920

Accounts	Balances	Receipts	Loans Authorized	Transfers To	Transfers From	Total Expenditures	Cash Expended	Balances
Building — Central Square	$79,972.06					$79,972.06	$2,400.00	$77,572.06
Department Equipment	345.00		$50,000.00		$345.00	50,000.00		50,000.00
Sewer Construction	6,793.16	$722.76	65,000.00			72,515.92	64,198.30	8,317.62
Sewer Separate System	13.62					13.62		13.62
Construction Ash Hopper	222.43			$136.76		359.19	359.19	
Acorn Street			1,400.00		458.51	941.49	941.49	
Allston Street			4,000.00		990.98	3,009.02	3,009.02	
Appleton Street			3,500.00		1,420.48	2,079.52	2,079.52	
Arlington Street			3,750.00		1,078.14	2,671.86	2,671.86	
Baldwin Street	3,250.00				812.76	2,437.24	2,437.24	
Brattle Street			36,000.00		1,777.60	34,222.40	34,222.40	
Burleigh Street			6,000.00			6,000.00	990.07	5,009.93
Camelia Avenue			1,000.00			1,000.00		1,000.00
Cameron Avenue			3,000.00		1,682.45	1,317.55	1,317.55	
Charles River Parkway	15,057.02				4,398.00	10,659.02	10,659.02	
Clay Street			5,000.00		2,161.77	2,838.23	2,838.23	
Columbia Street				1,000.00	39.85	960.15	960.15	
Dana Street			2,700.00		1,432 27	1,267.73	1,267.73	
Eighth Street	2,418.79				897.44	1,521.35	1,521.35	
Fayerweather Street			5,000.00			5,000.00	454.56	4,545.44
Fifth Street			1,000.00	849.85		1,849.85	1,849.85	
Fourth Street			1,000.00			1,000.00	84.52	915.48
Franklin Street	6,500.00				620.46	5,879.54	5,879.54	
Gibson Street	1,450.00				224.80	1,225.20	1,225.20	
Gore Street			35,000.00			35,000.00	11,516.30	23,483.70
Granville Road			1,600.00			1,600.00	52.75	1,546.25
Hampshire Street			12,500.00	30.44		12,530.44	12,530.44	
Hawthorne Street			2,200.00			2,200.00		2,200.00
Highland Street			3,600.00		897.11	2,702.89	2,702.89	
Huron Avenue			2,000.00	342.35		2,342.35	2,342.35	
Irving Street	2,160.75				78.91	2,081.84	2,081.84	
Leonard Avenue			2,500.00		974.31	1,525.69	1,525.69	
Maple Avenue			4,400.00		1,977.95	2,422.05	2,422.05	
Massachusetts Avenue	700.34		25,000.00	2,020.27		27,720.61	27,720.61	
Mt. Auburn Street	25,000.00			4,424.69		29,424.69	29,424.69	
Newton Street	900.00				156.34	743.66	743.66	
Otis Street	4,748.61				975.60	3,773.01	3,773.01	
Oxford Street			25,000.00	5,465.80		30,465.80	30,465.80	
Palermo Street	1,000.00				222.01	777.99	777.99	
Plymouth Street	3,200.00				364.82	2,835.18	2,835.18	
Portland Street			21,000.00		279.71	20,720.29	20,720.29	
Prospect Street	9,415.30		3,500.00		1,431.83	11,483.47	11,483.47	
Putnam Square			6,000.00	3,259.05		9,259.05	9,259.05	
Carried forward	$163,147.08	$722.76	$332,650.00	$17,529.21	$25,699.10	$488,349.95	$313,745.85	$174,604.10

STATEMENT SHOWING AUDITOR'S AND TREASURER'S EXPENDITURES AND BALANCES for Year, Apr. 1, 1919, to Mar. 31, 1920

Accounts	Balances	Receipts	Loans Authorized	Transfers To	Transfers From	Total Expenditures	Cash Expended	Balances
Brought forward	$163,147.08	$722.76	$332,650.00	$17,529.21	$25,699.10	$488,349.95	$313,745.85	$174,604.10
Quincy Square			12,000.00		3,845.05	8,154.95	8,154.95	
Scott Street	2,882.90			427.76		3,310.66	3,310.66	
Sixth Street			1,000.00		443.23	556.77	556.77	
Spring Street			5,000.00		604.06	4,395.94	4,395.94	
Thorndike Street	7,000.00				267.21	6,732.79	6,732.79	
Upland Road			3,900.00		222.88	3,677.12	3,677.12	
Washington Street			8,700.00	1,508.59	2,151.18	8,057.41	8,057.41	
Webster Avenue	144.38				144.38			
Western Avenue	4,711.90		13,000.00	554.18		18,266.08	18,266.08	
Windsor Street				1,200.00	298.26	901.74	901.74	
Five Year Balances				12,247.37		12,247.37		12,247.37
Edgestones & Sidewalks	13,971.13	$5,348.55	10,000.00			29,319.68	27,339.53	1,980.15
Land Damages	290.40					290.40		290.40
Commercial Avenue Bridges	1,951.00					1,951.00	1,077.56	873.44
First Street Bridge	5,000.00					5,000.00		5,000.00
Walden Street Bridge	272.93				85.47	187.46		187.46
Cambridge Bridge	7,309.27					7,309.27		7,309.27
Harvard Bridge	18,471.05	11,929.49	13,000.00			43,400.54	42,690.31	710.23
Agassiz School	78				.78			
Restoring City Home	104.92				104.92			
Municipal Hospital	74.83		150,000.00			150,074.83	59.90	150,014.93
Addition to High & Latin Schools	20,467.04			185.57		20,652.61	20,652.61	
Addition to Morse School			18,500.00	328.08		18,828.08	18,828.08	
Memorial Flag Staff	17.07				17.07			
Land for Playgrounds	5,475.25					5,475.25	4,990.30	484.95
River Parkway	13.64					13.64		13.64
Bath House at Magazine Beach	974.43				97.17	877.26	877.26	
Water Construction General	3,759.84					3,759.84		3,759.84
Detector Meters	4,565.15	2,115.26				6,680.41	461.26	6,219.15
Hobbs' Brook Conduit	2,588.47					2,588.47		2,588.47
Total	$263,193.46	$20,116.06	$567,750.00	$33,980.76	$33,980.76	$851,059.52	$484,776.12	$366,283.40

SCHEDULE B

Nos. I to VII

ASSETS AND LIABILITIES

SCHEDULE B-I

March 31, 1918

ASSETS

Current Assets (B-II)	$1,310,216 51
Contingent Assets (B-III)	86,790 00
Trust Funds and Special Deposits (B-IV)	201,792 45
Sinking Funds (B-V)	3,987,981 36
Total Available Assets	$5,586,780 32
Fixed Assets (Unavailable B-VI)	18,559,544 83
Grand Total of Assets	$24,146,325 15

LIABILITIES

Current Liabilities (B-I)	
Contingent Liabilities (B-IV)	
Trust Liabilities (B-IV)	$201,792 45
Bonded Debt (B-V)	9,922,950 00
Total Liabilities	$10,124,742 45
General Deficit and Surplus Account (B-VII)	14,021,582 70
Grand Total of Liabilities	$24,146,325 15

SCHEDULE B-II

CURRENT ASSETS

Cash:			
Cash in the Treasury, March 31, 1920			$248,870 84
Good Accounts Receivable:			
Delinquent Property Taxes, 1919		$691,873 52	
Delinquent Property Taxes, 1918		217,565 50	
Other good accounts:			
Moth Assessments		248 56	
Sewer Assessments		3,631 67	
Sidewalk Assessments		7,543 48	
Street Watering Assessments		275 23	
Water Department, Rates, Meters, etc.		37,127 11	
Miscellaneous bills as follows:			
City Messenger	$114 31		
Health	30,119 28		
Sewer	313 05		
Street	3,874 35		
Outside Aid	43,183 50		
Schools	2,304 88		
Park	527 87		
Cemetery	5,438 60		
Municipal Hospital	14,442 62		
Soldiers' Benefits	2,762 14		
		103,080 60	
Total Good Accounts receivable			1,061,345 67
Total Current Assets			$1,310,216 51

CURRENT LIABILITIES

(Floating Debts)

1. Outstanding Accounts Due and Unpaid:		
Of the current year		
Of previous years		
Surplus of Current Assets (B-VII)		$1,310,216 51

SCHEDULE B-III

CONTINGENT ASSETS

Doubtful Accounts Receivable:		
Delinquent Personal Property and Poll Taxes, viz.:		
1917	$39,185 96	
1916	33,357 05	
1915	800 80	
1914	506 62	
1913	332 60	
		$74,183 03
Liens		12,606 97
Other doubtful accounts, viz.:		
Miscellaneous bills		
		$86,790 00

CONTINGENT LIABILITIES

Retention Fund Account:	
Percentage of Contractors' payments retained, viz.:	
Surplus of Contingent Assets (B-VII)	$86,790 00

SCHEDULE B-IV

TRUST FUND ASSETS

Special Deposits, etc., viz.:		
Cemetery Fund	$1,078 62	
Bridge Charitable Fund	2,795 83	
Dowse Institute Fund	1,096 35	
Daniel White Charity Fund	882 68	
Sarah E. Russell Fund	814 41	
William E. Saunders Fund	505 12	
Citizens' Subscription Fund	286 01	
Cummings Legacy	48 58	
Fay Legacy	50 03	
James A. Woolson Fund	301 71	
Edward H. Whorf Fund	691 29	
William Penn Harding Fund	1,092 92	
John Wesley Freese Fund	109 88	
Mehitable C. C. Wilson Fund	698 21	
Hopkins Fund, The	1,213 48	
Abigail W. Howe Fund	3,176 82	
Tailings Account Trust Funds	4,890 22	
		19,732 16
Investment of Trust Funds:		
Stock and Bonds in Various Funds, viz.:		
Cemetery Fund	$126,318 00	
Cummings Legacy	2,000 00	
Fay Legacy	1,000 00	
Cemetery Funds, Deeds in Trust	432 00	
Citizens' Subscription Fund	5,500 00	
Dowse Institute Fund	10,000 00	
Daniel White Charity Fund	10,360 00	
Sanders Temperance Fund	11,100 00	
William E. Saunders Fund	7,350 29	
James A. Woolson Fund	5,000 00	
Edward H. Whorf Fund	3,000 00	
		182,060 29
Total Assets in Trust Funds		$201,792 45

LIABILITIES

Trust Funds and Special Funds, viz.:		
Cemetery Fund Account	$127 396 62	
Bridge Charitable Fund	2,795 83	
Dowse Institute Fund	11,096 35	
Daniel White Charity Fund	11,242 68	
Sarah E. Russell Fund	814 41	
William E. Saunders Fund	7,855 41	
Citizens' Subscription Fund	5,786 01	
Cummings Legacy	2,048 58	
Amount carried forward	$169,035 89	$201,792 45

TRUST FUND LIABILITIES—Concluded

Schedule B-IV—Concluded

Amount brought forward	$169,035 89	$201,792 45
Fay Legacy	1,050 03	
James A. Woolson Fund	5,301 71	
Edward H. Whorf Fund	3,691 29	
William Penn Harding Fund	1,092 92	
The Hopkins Fund	1,213 48	
Cemetery Fund, Deeds in Trust	432 00	
Sanders Temperance Fund	11,100 00	
Mehitable C. C. Wilson Fund	698 21	
John Wesley Freese Fund	109 88	
Tailings Account Trust Fund	4,890 22	
Abigail W. Howe Fund	3,176 82	
Total Liabilities		$201,792 45

SCHEDULE B-V

SINKING FUND ASSETS

Investment of Sinking Funds:

Bonds and Other Securities, viz.:
(For list of securities see Report of the Sinking Fund Commissioners)

Sinking Funds, City Debt	$3,345,431 84	
Sinking Funds, Water Debt	642,549 52	
Total Sinking Funds		$3,987,981 36
Excess of Debt (Net City and Water Debts) (See B-VII)		5,934,968 64
		$9,922,950 00

BONDED DEBTS OF THE CITY

1. General Bonds:

a. For General Municipal Purposes:
City Funded and Serial Debt $8,866,450 00

b. For Municipal Enterprises:
Water Works, Funded and Serial Debt .. 1,056,500 00

2. Special Assessment Bonds:

Total of Bonded Debts $9,922,950 00

SCHEDULE B-VI

FIXED ASSETS

Land, Buildings and Equipment:

Law Department, equipment		$385 00
City Buildings:		
Land	$156,800 00	
Buildings	339,000 00	
Equipment	46,736 00	
		542,536 00
Police Department, equipment		9,704 00
Fire Department:		
Land	$60,200 00	
Buildings	193,400 00	
Equipment	137,646 00	
		391,246 00
Fire Alarm and Police Telegraph, equipment		60,515 00
Health Department:		
Land	$9,800 00	
Buildings	92,600 00	
Equipment	10,362 25	
		122,762 25
Inspection of Milk and Vinegar, equipment		879 00
Municipal Hospital:		
Land	$61,200 00	
Buildings	114,000 00	
Equipment	27,000 00	
		212,200 00
Cambridge Cemetery:		
Land	$66,900 00	
Buildings	7,600 00	
Equipment	5,000 00	
		79,500 00
Sealer of Weights and Measures, equipment		2,863 23
City Home:		
Land	$91,900 00	
Buildings	46,500 00	
Equipment	10,850 00	
		149,250 00
Overseers of Poor, office equipment		1,050 00
Engineering Department, equipment		146,289 50
Sewer Department:		
Land	$12,800 00	
Buildings	4,300 00	
Equipment	8,435 50	
		25,535 50
		$1,744,715 48

Schedule B-VI—Concluded

		$1,744,715 48
Street Department:		
Land	$109,300 00	
Building	59,500 00	
Equipment	101,450 00	
		270,250 00
Bridge Department, equipment		2,100 00
Water Works		6,745,894 52
Schools:		
Land	$435,900 00	
Buildings	2,525,000 00	
Equipment	199,049 79	
		3,159,049 79
Library:		
Land	$85,000 00	
Buildings	95,300 00	
Equipment	120,600 00	
		300,900 00
Parks:		
Land	$5,831,081 68	
Buildings	189,300 00	
Equipment	4,600 00	
		6,024,981 68
Playgrounds:		
Land	$201,900 00	
Equipment	53,953 36	
		255,853 36
Other land not included in any of the Dept. Schedules		55,800 00
Total Fixed Assets (See B-VII)		$18,559,544 83

SCHEDULE B-VII

GENERAL DEFICIT AND SURPLUS ACCOUNT

Deficits

A Deficit of Current Assets (B-II), if any		
B Surplus of Sinking Funds (B-V), if any		
A Deficit of Trust Fund Assets (B-IV), if any ..		
B Deficit of Sinking Funds Assets (B-V), viz.:		
Net Bonded Debt	$5,934,968 64	
Total of all Deficits		$5,934,968 64

Surplus

A Surplus of Current Assets (B-II), if any	$1,310,216 51	
A Surplus of Contingent Assets (B-III), if any ..	86,790 00	
A Surplus of Trust Funds (B-IV), if any		
B Surplus of Sinking Funds (B-V), if any		
Total Surplus, excluding Fixed Assets		$1,397,006 51
Excess of Deficits, viz.:		
Total Net Debts of the City		$4,537,962 13

Balance

Total of Fixed Assets:		
Land, Buildings, Equipments (B-VI)	$18,559,544 83	
Deduct Total Net Debts of the City, as above	4,537,962 13	
Balance of this Account, General Surplus (B-I)		$14,021,582 70

SCHEDULE B
No. VIII

CITY FUNDED DEBT;
CITY SERIAL DEBT
AND OTHER
MISCELLANEOUS TABLES

CITY DEBT

There have been additions to the City Debt during the year as follows:

Serial Loan No. 110—Street Loan, serial bonds, dated Oct. 1, 1919, payable 1920 to 1924, at an annual interest of 4½%. For Street Construction as authorized by Section 5 (8) Chapter 719, Acts of 1913, for Vassar Street	$2,500 00
Serial Loan No. 111—Street Loan, serial bonds, dated Oct. 1, 1919, payable 1920, to 1924, at an annual interest of 4½%. For Street Construction as authorized by Section 5 (12) Chapter 719, Acts of 1913, for Edgestones and Sidewalks	10,000 00
Serial Loan No. 112—Street Loan, serial bonds, dated Oct. 1, 1919, payable 1920, to 1924, at an annual interest of 4½%. For Street Construction as authorized by Section 5 (8), Chapter 719, Acts of 1913, for Acorn, Dana, Granville Road, Washington, Hawthorne, Maple Avenue, Upland Road, Fourth, Fifth, Sixth, Highland, Appleton, Clay, Cameron Avenue, Huron Avenue, and Spring Streets ..	50,000 00
Serial Loan No. 113—Street Loan, serial bonds, dated Oct. 1, 1919, payable 1920, to 1924, at an annual interest of 4½%. For Street Construction as authorized by Section 5 (8), Chapter 719, Acts of 1913, for Arlington Street and Leonard Avenue	6,250 00
Serial Loan No. 114—Street Loan, serial bonds, dated Oct. 1, 1919, payable 1920, to 1924, at an annual interest of 4½%. For Street Construction as authorized by Section 5 (7), Chapter 719, Acts of 1913, for Cambridge Street, Inman Square to Railroad Crossing	10,000 00
Serial Loan No. 115—Street Loan, serial bonds, dated Oct. 1, 1919, payable 1920, to 1924, at an annual interest of 4½%. For Street Construction as authorized by Section 5 (7), Chapter 719, Acts of 1913, for Mt. Auburn Street, Putnam to Brattle Squares	25,000 00
Serial Loan No. 116 to 120—Street Loan, serial bonds, dated Oct. 1, 1919, payable 1920, to 1924, at annual interest of 4½%. For Street Construction as authorized by Section 5 (7), Chapter 719, Acts of 1913, for Brattle, Gore, Hampshire, Oxford, Prospect, Portland Streets; Massachusetts Avenue, Western Avenue, Putnam and Quincy Squares ..	180,000 00
Serial Loan No. 121—Sewer Construction Loan, Serial bonds dated Oct. 1, 1919, payable 1920, to 1934, at an annual interest of 4½%. For the purpose of constructing sewers for sanitary purposes and for sewerage disposal as authorized by Section 5 (1), Chapter 719, Acts of 1913	7,500 00
Serial Loan No. 122—Sewer Construction Loan, serial bonds dated Oct. 1, 1919, payable 1920, to 1949, at an annual interest of 4½%. For the purpose of constructing sewers for sanitary purposes and for sewerage disposal as authorized by Section 5 (1), Chapter 719, Acts of 1913	15,000 00
Serial Loan No. 123—Sewer Construction Loan, serial bonds dated Oct. 1, 1919, payable 1920, to 1949, at an annual interest of 4½%. For the purpose of constructing sewers for sanitary purposes and for sewerage disposal as authorized by Section 5 (1), Chapter 719, Acts of 1913	30,000 00
Amount carried forward.....	$336,250 00

City Dept.—Continued

Amount brought forward		$336,250 00
Serial Loan No. 124—Schoolhouse Loan, serial bonds, dated Oct. 1, 1919, payable 1920, to 1934, at an annual interest of 4½%. For addition to Morse School as authorized by Section 5 (4), Chapter 719, Acts of 1913		15,000 00
Serial Loan Nos. 125 to 129—Cambridge City Hospital Loan, serial bonds, dated Oct. 1, 1919, payable 1920, to 1939, at an annual interest of 4½%. For the purpose of constructing an addition to the Cambridge City Hospital as authorized by Chapter 103, Acts of 1919		150,000 00
Serial Loan No. 130—Street Loan, serial bonds, dated Oct. 1, 1919, payable 1920, to 1924, at an annual interest of 4½%. Chapter 719, Acts of 1913, for Edgestones and Sidewalks		5,000 00
		$506,250 00
The following Funded Debt has matured and been paid:		
Schoolhouse Loan, registered bonds, issued July 1, 1899, at an annual interest of 3½%	$42,000 00	
Schoolhouse Loan, registered bonds, issued Nov. 1, 1899, at an annual interest of 3½%	13,000 00	
Street Loan, registered bonds, issued Nov. 1, 1899, at an annual interest of 3½%	5,000 00	
Street Loan, registered bonds, issued Jan. 1, 1910, at an annual interest of 3½%	75,000 00	
	$135,000 00	
Serial bonds have matured and been paid	201,200 00	
		336,200 00
Net increase in debt in 1919, to 1920		$170,050 00

City Debt—Continued

The following is a statement of the total funded City Debt, with the rates of interest thereon:

HARVARD BRIDGE LOAN

Date of Issue.	Rate of Interest.	When Due.	Amount.	Total.
Nov. 1, 1890 R	4 per cent.—30 yrs.	Nov. 1, 1920....	$5,000 00	
July 1, 1891 R. & C.	4 " —30 "	July 1, 1921....	60,000 00	
Aug. 1, 1893 C.....	4 " —30 "	Aug. 1, 1923....	10,000 00	$75,000 00

CAMBRIDGE BRIDGE LOAN

July 1, 1899 R.....	3½ per cent.—40 yrs.	July 1, 1939....	$50,000 00	
July 2, 1900 R.....	3½ " —40 "	July 2, 1940....	100,000 00	
Feb. 1, 1901 R.....	3 " —40 "	Feb. 1, 1941....	100,000 00	
Nov. 1, 1901 R.....	3½ " —40 "	Nov. 1, 1941....	100,000 00	
Aug. 1, 1902 R. & C.	3½ " —40 "	Aug. 1, 1942....	100,000 00	
Jan. 1, 1903 R.....	3½ " —40 "	Jan. 1, 1943....	50,000 00	
Apr. 1, 1903 R.....	3½ " —40 "	Apr. 1, 1943....	50,000 00	
Aug. 1, 1903 C.....	3½ " —40 "	Aug. 1, 1943....	50,000 00	
Jan. 1, 1904 R.....	3½ " —40 "	Jan. 1, 1944....	100,000 00	
May 1, 1904 R. & C.	3½ " —40 "	May 1, 1944....	200,000 00	
Aug. 1, 1904 R.....	3½ " —40 "	Aug. 1, 1944....	100,000 00	
Sept. 1, 1904 R.....	3½ " —40 "	Sept. 1, 1944....	50,000 00	
May 1, 1905 R.....	3½ " —40 "	May 1, 1944....	150,000 00	
Dec. 1, 1905 R.....	3½ " —40 "	Dec. 1, 1945....	100,000 00	
Aug. 1, 1906 R.....	4 " —40 "	Aug. 1, 1946....	150,000 00	
Jan. 1, 1907 R.....	4 " —40 "	Jan. 1, 1947....	50,000 00	
July 1, 1907 C.....	4 " —40 "	July 1, 1947....	40,000 00	
Oct. 1, 1907 C.....	4 " —40 "	Oct. 1, 1947....	15,000 00	
Aug. 1, 1908 R.....	4 " —40 "	Aug. 1, 1948....	45,000 00	
July 1, 1910 R.....	4 " —40 "	July 1, 1950....	20,000 00	
Dec. 1, 1911 C.....	3½ " —40 "	Dec. 1, 1951....	10,000 00	
Mar. 1, 1912 C.....	3½ " —40 "	Mar. 1, 1952....	10,000 00	$1,640,000 00

BROOKLINE BRIDGE LOAN

Jan. 1, 1906 R.....	3½ per cent.—40 yrs.	Jan. 1, 1946....	$20,000 00	
Sept. 1, 1906 R.....	4 " —40 "	Sept. 1, 1946....	5,000 00	$25,000 00

COMMERCIAL AVENUE BRIDGE

Aug. 1, 1906 R	4 per cent.—40 yrs.	Aug. 1, 1946....		$50,000 00

BUILDING LOAN

Apr. 1, 1903 R	3½ per cent.—20 yrs.	Apr. 1, 1923....	$3,000 00	
Apr. 1, 1904 R	3½ " —20 "	Apr. 1, 1924....	25,000 00	
May 1, 1904 R	3½ " —20 "	May 1, 1924....	5,000 00	
Sept. 1, 1907 R	4 " —20 "	Sept. 1, 1927 ...	30,000 00	$63,000 00

Amount carried forward..... $1,853,000 00

City Debt—Continued

Amount brought forward $1,853,000 00

CAMBRIDGE BRIDGE SPECIAL LOAN

(Charles River Dam.)

May 1, 1904 R.....	3½ per cent.—30 yrs.	May 1, 1934....		$28,000 00

CITY LOAN

July 1, 1910 R.....	4 per cent.—10 yrs.	July 1, 1920....	$8,000 00	
Mar. 1, 1912 C.....	3½ " —10 "	Mar. 1, 1922....	15.500 00	$32,500 00

HOSPITAL LOAN

July 1, 1902 R.....	3½ per cent.—20 yrs.	July 1, 1922....	$6,000 00	
Aug. 1, 1908 R.....	4 " —20 "	Aug. 1, 1928....	20,000 00	
July 1, 1910 C.....	4 " —20 "	July 1, 1930....	95,000 00	
Dec. 1, 1911 R.....	3½ " —20 "	Dec. 1, 1931....	4,000 00	
Mar. 1, 1912 C.....	3½ " —20 "	Mar. 1, 1932....	25,000 00	$150,000 00

METROPOLITAN PARK ASSESSMENT LOAN

Aug. 1, 1902 R.....	3½ per cent.—30 yrs.	Aug. 1, 1932....		$46,000 00

PARK LOAN

Feb. 1, 1894 R. & C.	4 per cent.—30 yrs.	Feb. 1, 1924....	$360,000 00	
Aug. 1, 1895 R.....	4 " —40 "	Aug. 1, 1935....	100,000 00	
Feb. 1, 1896 R.....	4 " —40 "	Feb. 1, 1936....	100,000 00	
Aug. 1, 1896 R.....	4 " —30 "	Aug. 1, 1926....	100,000 00	
Oct. 1, 1896 R.....	4 " —30 "	Oct. 1, 1926....	40,000 00	
Sept. 1, 1897 R.....	3½ " —40 "	Sept. 1, 1937....	100,000 00	
Nov. 1, 1897 R.....	3½ " —40 "	Nov. 1, 1937....	50,000 00	
June 1, 1898 R.....	3½ " —40 "	June 1, 1938....	50,000 00	
Aug. 1, 1898 R.....	3½ " —40 "	Aug. 1, 1938....	100,000 00	
Aug. 1, 1899 R.....	3½ " —40 "	Aug. 1, 1939....	100,000 00	
July 2, 1900 R.....	3½ " —40 "	July 2, 1940....	50,000 00	
Nov. 1, 1900 R.....	3½ " —40 "	Nov. 1, 1940....	50,000 00	
Oct. 1, 1901 R.....	3½ " —40 "	Oct. 1, 1942....	100,000 00	
July 1, 1902 R.....	3½ " —40 "	July 1, 1942....	48,000 00	
Apr. 1, 1903 R.....	3½ " —40 "	Apr. 1, 1943....	50,000 00	
Sept. 1, 1904 R.....	3½ " —40 "	Sept. 1, 1944....	25,000 00	
Nov. 1, 1904 R.....	3½ " —40 "	Nov. 1, 1944....	6,000 00	
Apr. 1, 1905 R.....	3½ " —40 "	Apr. 1, 1945....	5,000 00	
May 1, 1905 R.....	3½ " —40 "	May 1, 1945....	45,000 00	
Aug. 1, 1905 R.....	3½ " —40 "	Aug. 1, 1945....	5,000 00	
Sept. 1, 1906 R.....	4 " —40 "	Sept. 1, 1946....	25,000 00	
Oct. 1, 1907 R.....	4 " —40 "	Oct. 1, 1947....	10,000 00	
Aug. 1, 1908 R.....	4 " —40 "	Aug. 1, 1948....	30,000 00	
Nov. 1, 1908 R.....	4 " —40 "	Nov. 1, 1948....	12,000 00	
Jan. 1, 1910 R.....	3½ " —40 "	Jan. 1, 1950....	8,800 00	
Mar. 1, 1911 R.....	3½ " —40 "	Mar. 1, 1951....	17,000 00	
July 1, 1911 R.....	3½ " —40 "	July 1, 1951....	7 000 00	
Dec. 1 1911 R. & C.	3½ " —40 "	Dec. 1, 1951....	6,200 00	$1,600,000 00

Amount carried forward $3,700,500 00

City Debt—Continued

Amount brought forward..... $3,700,500 00

PUBLIC LIBRARY LOAN

Nov. 1, 1901 R.....	3½ per cent.—20 yrs.	Nov. 1, 1921....		$27,000 00

SCHOOLHOUSE LOAN

July 1, 1901 R.....	3½ per cent.—20 yrs.	July 1, 1921....	$76,000 00	
July 1, 1902 R.....	3½ " —20 "	July 1, 1922....	86,500 00	
Oct. 1, 1902 R.....	3½ " —20 "	Oct. 1, 1922....	11,000 00	
Oct. 1, 1903 R.....	3½ " —20 "	Oct. 1, 1923....	80,000 00	
Apr. 1, 1904 C.....	3½ " —20 "	Apr. 1, 1924....	80,000 00	
Nov. 1, 1904 R.....	3½ " —20 "	Nov. 1, 1924....	20,000 00	
Nov. 1, 1904 R.....	3½ " —20 "	Nov. 1, 1924....	6,000 00	
May 1, 1905 R.....	3½ " —20 "	May 1, 1925....	20,950 00	
Aug. 1, 1905 R.....	3½ " —20 "	Aug. 1, 1925....	20,000 00	
Aug. 1, 1906 R.....	4 " —20 "	Aug. 1, 1926....	33,000 00	
Nov. 1, 1906 R.....	4 " —20 "	Nov. 1, 1926....	14,000 00	
Dec. 1, 1908 R.....	3½ " —20 "	Dec. 1, 1928....	40,000 00	
Jan. 1, 1910 R & C	3½ " —20 "	Jan. 1, 1930....	93,500 00	
July 1, 1910 R.....	4 " —20 "	July 1, 1930....	120,000 00	
Mar. 1, 1911 R.....	3½ " —20 "	Mar. 1, 1931....	5,000 00	
Mar. 1, 1912 C.....	3½ " —20 "	Mar. 1, 1932....	2,500 00	
Feb. 1, 1913 C.....	3½ " —20 "	Feb. 1, 1933....	5,000 00	$713,450 00

SEWER LOAN (Construction General)

Aug. 1, 1894 R.& C.	4 per cent —30 yrs.	Aug. 1, 1924....	$75,000 00	
Oct. 1, 1895 R.....	4 " —30 "	Oct. 1, 1925....	60,000 00	
Aug. 1, 1901 R.....	3½ " —30 "	Aug. 1, 1931....	10,000 00	
Oct. 1, 1903 R.....	3½ " —30 "	Oct. 1, 1933....	20,000 00	
May 1, 1904 R.....	3½ " —30 "	May 1, 1934....	40,000 00	
Nov. 1, 1904 R.....	3½ " —30 "	Nov. 1, 1934....	5,000 00	
May 1, 1905 R.....	3½ " —30 "	May 1, 1935....	15,000 00	
May 1, 1906 R.....	4 " —30 "	May 1, 1936....	10,000 00	
Apr. 1, 1907 R.....	4 " —30 "	Apr. 1, 1937....	35,000 00	
Dec. 1, 1908 R.....	4 " —30 "	Dec. 1, 1938....	5,000 00	
Jan. 1, 1910 R. & C.	3½ " —30 "	Jan. 1, 1940....	23,000 00	
May 1, 1910 R.....	4 " —30 "	May 1, 1940....	15,000 00	
Mar. 1, 1911 R.....	3½ " —30 "	Mar. 1, 1941....	10,000 00	
July 1, 1911 R.....	3½ " —30 "	July 1, 1941....	10,000 00	
Feb. 1, 1913 C.....	3½ " —30 "	Feb. 1, 1943....	10,000 00	
July 1, 1913 C.....	4 " —30 "	July 1, 1943....	20,000 00	
July 1, 1913 C.....	4 " —30 "	July 1, 1943....	5,000 00	$368,000 00

SEWER LOAN (Improved Sewerage)

Nov. 1, 1899 R.....	3½ per cent.—30 yrs.	Nov. 1, 1929....	$42,000 00	
July 2, 1900 R.....	3½ " —30 "	July 2, 1930....	100,000 00	
Aug. 1, 1901 R.....	3½ " —30 "	Aug. 1, 1931....	100,000 00	
Nov. 1, 1902 R.....	3½ " —30 "	Nov. 1, 1932....	20,000 00	
Apr. 1, 1903 R.....	3½ " —30 "	Apr. 1, 1933....	40,000 00	
May 1, 1904 R.....	3½ " —30 "	May 1, 1934....	47,000 00	
May 1, 1905 R.....	3½ " —30 "	May 1, 1935....	50,000 00	$399,000 00

Amount carried forward..... $5,207,950 00

City Debt—Continued

Amount brought forward..... $5,207,950 00

SEWER LOAN (Separate System of Drainage)

May 1, 1904 R.....	3½ per cent.	—30 yrs.	May 1, 1934....	$25,000 00	
May 1, 1905 R.....	3½ "	—30 "	May 1, 1935....	25,000 00	
May 1, 1906 R.....	4 "	—30 "	May 1, 1936....	25,000 00	
Sept. 1, 1906 R.....	4 "	—30 "	Sept. 1, 1936....	25,000 00	
Apr. 1, 1907 R.....	4 "	—30 "	Apr. 1, 1937....	25,000 00	
Nov. 1, 1907 R.....	4 "	—30 "	Nov. 1, 1937....	10,000 00	
Aug. 1, 1908 R.....	4 "	—30 "	Aug. 1, 1938....	25,000 00	
Dec. 1, 1908 R.....	4 "	—30 "	Dec. 1, 1938....	12,000 00	
July 1, 1909 R.....	3½ "	—30 "	July 1, 1939....	2,000 00	
Jan. 1, 1910 C.....	3½ "	—30 "	Jan. 1, 1940....	23,000 00	
May 1, 1910 R.....	4 "	—30 "	May 1, 1940....	10,000 00	
July 1, 1910 R.....	4 "	—30 "	July 1, 1940....	15,000 00	
July 1, 1911 R.....	3½ "	—30 "	Mar. 1, 1941....	10,000 00	
Dec. 1, 1911 C.....	3½ "	—30 "	Dec. 1, 1941....	10,000 00	
Sept. 1, 1912 C.....	3½ "	—30 "	Sept. 1, 1942....	15,000 00	
Feb, 1, 1913 C.....	3½ "	—30 "	Feb. 1, 1943....	10,000 00	$267,000 00

STREET LOAN

Nov. 1, 1900 R.....	3½ per cent.	—20 yrs.	Nov. 1, 1920....	$21,000 00	
July 1, 1901 R.....	3½ "	—20 "	July 1, 1921....	54,000 00	
July 1, 1902 R.....	3½ "	—20 "	July 1, 1922....	30,000 00	
Nov. 1, 1902 R.....	3½ "	—20 "	Nov. 1, 1922....	14,000 00	
Apr, 1, 1903 R.....	3½ "	—20 "	Apr. 1, 1923....	4,000 00	
Nov. 2, 1903 R.....	3½ "	—20 "	Nov. 1, 1923....	12,000 00	
Sept. 1, 1904 R.....	3½ "	—20 "	Sept. 1, 1924....	59,000 00	
Nov. 1, 1904 R.....	3½ "	—20 "	Nov. 1, 1924....	6,500 00	
May 1, 1905 R.....	3½ "	—20 "	May 1, 1925....	84,000 00	
Nov. 1, 1905 R.....	3½ "	—20 "	Nov. 1, 1925....	1,500 00	
May 1, 1906 R & C	4 "	—20 "	May 1, 1926....	100,000 00	
Aug. 1, 1906 R.....	4 "	—20 "	Aug. 1, 1926....	22,000 00	
Apr. 1, 1907 R.....	4 "	—20 "	Apr. 1, 1927....	40,000 00	
June 1, 1907 R.....	4 "	—20 "	June 1, 1927....	19,000 00	
Sept. 1, 1907 R.....	4 "	—20 "	Sept. 1, 1927....	25,000 00	
Nov. 1, 1907 R.....	4 "	—20 "	Nov. 1, 1927....	10,000 00	
Jan. 1, 1908 C.....	4 "	—20 "	Jan. 1, 1928....	34,000 00	
Aug. 1, 1908 R.....	4 "	—20 "	Aug. 1, 1928....	42,000 00	
Mar. 1, 1909 R	3½ "	—20 "	Mar. 1, 1929....	20,000 00	
Jan. 1, 1910 R.& C.	3½ "	—20 "	Jan. 1, 1930....	13,500 00	
July 1, 1910 R.....	4 "	—20 "	July 1, 1930....	12,000 00	
Mar. 1, 1911 R.....	3½ "	—20 "	Mar. 1, 1931....	27,000 00	
Mar. 1, 1911 R.....	3½ "	—10 "	Mar. 1, 1921....	50,800 00	
Mar. 1, 1911 R.....	4 "	—10 "	Mar. 1, 1921....	25,000 00	
July 1, 1911 R.....	3½ "	—20 "	July 1, 1931....	53,000 00	
July 1, 1911 C.....	3½ "	—10 "	July 1, 1921....	55,000 00	
Dec. 1, 1911 C.....	4 "	—10 "	Dec. 1, 1921....	17,000 00	
Sept. 1, 1912 C.....	4 "	—10 "	Sept. 1, 1922....	118,000 00	
Sept. 1, 1912 R.....	3½ "	—10 "	Sept. 1, 1922....	7,000 00	
Sept. 1, 1912 R. & C.	3½ "	—20 "	Sept. 1, 1932....	6,200 00	
Feb. 1, 1913 C.....	4 "	—10 "	Feb. 1, 1923....	13,000 00	
Feb. 1, 1913 C.....	3½ "	—20 "	Feb. 1, 1933....	6,250 00	
July 1, 1913 C.....	4 "	—10 "	July 1, 1923....	20,000 00	
July 1, 1913 C.....	4 "	—10 "	July 1, 1923....	37,800 00	
July 1, 1913 C.....	4 "	—20 "	July 1, 1933....	4,000 00	
Aug. 1, 1913 C.....	4 "	—20 "	Aug. 1, 1933....	3,700 00	
Aug. 1, 1913 C.....	4 "	—20 "	Aug. 1, 1933....	14,300 00	$1,081,550 00

Amount carried forward..... $6,556,500 00

City Debt—Continued

Amount brought forward $6,556,500 00

LAND FOR PLAYGROUND LOAN

July 1, 1910 R.....	4 per cent.—30 yrs.	July 1, 1940....	$50,000 00	
July 1, 1911 R.....	3½ " —30 "	July 1, 1941....	15,000 00	
Dec. 1, 1911 C.....	3½ " —30 "	Dec. 1, 1941....	30,000 00	$95,000 00

PLAYGROUND CONSTRUCTION LOAN

July 1, 1911 R.....	3½ per cent.—10 yrs.	July 1, 1921....	$25,000 00	
Sept. 1, 1912 C.....	4 " —10 "	Sept. 1, 1922....	35,000 00	$60,000 00

CHARLES RIVER BASIN ASSESSMENT LOAN

Dec. 1, 1911 C.....	4 per cent.—10 yrs.	Dec. 1, 1921....		$60,000 00

CEMETERY LOAN

July 1, 1911 R.....	3½ per cent.—10 yrs.	July 1, 1921....		$8,000 00

MUNICIPAL LOAN

Feb. 1, 1913 C.....	4 per cent.—10 yrs.	Feb. 1, 1923....	$39,800 00	
July 1, 1913 C.....	4 " —10 "	July 1, 1923....	25,000 00	$64,800 00

Total Funded Debt $6,844,300 00

SERIAL LOANS

Inside Debt Limit

Street Loans, due 1920 to 1935	$884,600 00	
School House Loans, due 1920 to 1938	207,250 00	
Building Loans, due 1920 to 1938	235,000 00	
Sewer Construction Loans, due 1920 to 1950	178,000 00	
Department Equipment Loan, due 1920 to 1924 ..	28,000 00	
City Loans, due 1920 to 1924	4,000 00	
		$1,536,850 00

Outside Debt Limit

Playground Loans, due 1920 to 1946	$25,800 00	
Sewer Separate Systems, due 1920 to 1946	57,500 00	
Hospital Loans, due 1920 to 1940	267,000 00	
Bridge Loans, due 1920 to 1946	52,000 00	
Park Loans, due 1920 to 1945	83,000 00	
		485,300 00

Total City Debt, March 31, 1920 ..... $8,866,450 00

SERIAL LOANS

Inside Debt Limit

Financial Year April 1 to March 31, in which the loans are due.	Street.	School.	Building.	Sewer Construction.	Department Equipment.	City.	Totals.
1920-21	$168,500 00	$13,000 00	$19,500 00	$8,000 00	$7,000 00	$1,000 00	$217,000 00
1921-22	156,350 00	13,000 00	19.500 00	8,000 00	7,000 00	1,000 00	204,850 00
1922-23	145,150 00	13,000 00	19,500 00	8,000 00	7,000 00	1,000 00	193,650 00
1923-24	127,550 00	13,000 00	19,500 00	8,000 00	7,000 00	1,000 00	176,050 00
1924-25	99,550 00	13,000 00	14,000 00	8,000 00			134,550 00
1925-26	62,550 00	13,000 00	14,000 00	8,000 00			97,550 00
1926-27	46,750 00	13,000 00	14,000 00	7,500 00			81,250 00
1927-28	33,150 00	13,000 00	14,000 00	7,500 00			67,650 00
1928-29	19,150 00	13,000 00	14,000 00	7,000 00			53,150 00
1929-30	15,900 00	13,000 00	11,000 00	7,000 00			46,900 00
1930-31	2,400 00	13,000 00	11,000 00	7,000 00			33,400 00
1931-32	2,400 00	13,000 00	11,000 00	7,000 00			33,400 00
1932-33	2,400 00	13,000 00	11,000 00	7,000 00			33,400 00
1933-34	2,400 00	13,000 00	11,000 00	7,000 00			33,400 00
1934-35	400 00	9,750 00	11,000 00	7,000 00			28,150 00
1935-36		5,500 00	11,000 00	6,500 00			23,000 00
1936-37		5,000 00	5,000 00	6,500 00			16,500 00
1937-38		5,000 00	5,000 00	6,000 00			16,000 00
1938-39				5,500 00			5,500 00
1939-40				4,500 00			4,500 00
1940-41				4,500 00			4,500 00
1941-42				4,500 00			4,500 00
1942-43				4,500 00			4,500 00
1943-44				4,500 00			4,500 00
1944-45				4,500 00			4,500 00
1945-46				4,500 00			4,500 00
1946-47				3,500 00			3,500 00
1947 48				3,000 00			3,000 00
1948-49				2,000 00			2,000 00
1949-50				1,500 00			1,500 00
	$884,600 00	$207,250 00	$235,000 00	$178,000 00	$28,000 00	$4,000 00	$1,536,850 00

City Debt—Continued

SERIAL LOANS

Outside Debt Limit

Financial Year April 1 to March 31, in which loans are due.	Play-grounds.	Sewer Separate System.	Hospital.	Bridge.	Park.	Water.	Total
1920–21...	$1,300 00	$3,000 00	$15,500 00	$2,000 00	$5,000 00	$20,500 00	$47,300 00
1921–22...	1,300 00	3,000 00	15,500 00	2,000 00	4,000 00	20,500 00	46,300 00
1922–23...	1,300 00	3,000 00	15,500 00	2,000 00	4,000 00	20,500 00	46,300 00
1923–24...	1,300 00	3,000 00	15,500 00	2,000 00	4,000 00	20,500 00	46,300 00
1924–25...	1,300 00	3,000 00	15,500 00	2,000 00	4,000 00	20,500 00	46,300 00
1925–26...	1,300 00	3,000 00	15,500 00	2,000 00	4,000 00	20,500 00	46,300 00
1926–27...	1,300 00	3,000 00	15,500 00	2,000 00	4,000 00	8,000 00	33,800 00
1927–28...	1,300 00	2,000 00	15,500 00	2,000 00	4,000 00	8,000 00	32,800 00
1928–29...	1,300 00	2,000 00	15,500 00	2,000 00	4,000 00	8,000 00	32,800 00
1929–30...	1,300 00	2,000 00	15,500 00	2,000 00	4,000 00	8,000 00	32,800 00
1930–31...	1,300 00	2,000 00	15,500 00	2,000 00	4,000 00	7,000 00	31,800 00
1931–32...	1,300 00	2,000 00	15,500 00	2,000 00	4,000 00	7,000 00	31,800 00
1932–33...	1,300 00	2,000 00	15,500 00	2,000 00	4,000 00	7,000 00	31,800 00
1933–34...	1,300 00	2,000 00	15,500 00	2,000 00	3,000 00	6,000 00	29,800 00
1934–35...	1,300 00	2,000 00	15,500 00	2,000 00	3,000 00	3,500 00	27,300 00
1935–36...	1,300 00	2,000 00	12,500 00	2,000 00	3,000 00	3,500 00	24,300 00
1936–37...	500 00	2,000 00	8,000 00	2,000 00	3,000 00	2,500 00	18,000 00
1937–38...	500 00	2,000 00	8,000 00	2,000 00	3,000 00	2,500 00	18,000 00
1938–39...	500 00	2,000 00	3,000 00	2,000 00	3,000 00	1,500 00	12,000 00
1939–40...	500 00	2,000 00	3,000 00	2,000 00	3,000 00	1,500 00	12,000 00
1940–41...	500 00	2,000 00		2,000 00	3,000 00	1,500 00	9,000 00
1941–42...	500 00	2,000 00		2,000 00	2,000 00	1,500 00	8,000 00
1942–43...	500 00	2,000 00		2,000 00	2,000 00	1,500 00	8,000 00
1943–44...	500 00	2,000 00		2,000 00	1,000 00	1,500 00	7,000 00
1944–45...	500 00	2,000 00		2,000 00	1,000 00	1,000 00	7,000 00
1945–46...	500 00	500 00		2,000 00			3,000 00
	$25,800 00	$57,500 00	$267,000 00	$52,000 00	$83,000 00	$204,500 00	$689,800 00

Following is a statement of the total Funded Water Debt of the City, with rates of interest thereon:

Date of Issue.	Rate of Interest	Term.	When due.	Amount.	Total.
Nov. 1, 1900 R.....	3½	20 yrs.	Nov. 1, 1920....	$30,000 00	
July 1, 1901 R.....	3½	20 "	July 1, 1921....	30,000 00	
July 1, 1902 R.....	3½	20 "	July 1, 1922....	13,500 00	
Nov. 1, 1902 R.....	3½	20 "	Nov. 1, 1922....	5,000 00	
April 1, 1894 C.....	4	30 "	April 1, 1924....	300,000 00	
May 1, 1905 R.....	3½	20 "	May 1, 1925....	46,000 00	
May 1, 1906 R. & C..	4	30 "	May 1, 1936....	280,000 00	
June 1, 1907 R.....	4	30 "	June 1, 1937....	49,000 00	
July 1, 1907 C.....	4	30 "	July 1, 1937....	25,000 00	
June 1, 1908 R.....	4	20 "	June 1, 1928....	20,000 00	
Aug. 1, 1908 R.....	4	30 "	Aug. 1, 1938....	17,000 00	
Jan. 1, 1910 C.....	3½	20 "	Jan. 1, 1930....	5,000 00	
Feb. 1, 1910 R.....	3½	20 "	Feb. 1, 1930....	5,000 00	
Mar. 1, 1911 R.....	3½	30 "	Mar. 1, 1941....	16,500 00	
Dec. 1, 1911 C.....	3½	30 "	Dec. 1, 1941....	10,000 00	$852,000 00

City Debt—Concluded

CITY FUNDED DEBT

	April 1, 1919	April 1, 1920	Increase 1919-1920	Decrease 1919-1920
Funded City Debt	$6,979,300.00	$6,844,300.00		$135,000.00
Sinking Funds for Funded City Debt	3,143,928.87	3,345,431.84	$201,502.97	
Net Funded City Debt	3,835,371.13	3,498,868.16		336,502.97
Serial City Debt	1,716,450.00	2,022,150.00	305,700.00	
Net City Debt	5,551,821.13	5,521,018 16		30,802.97
Funded Water Debt	875,000.00	852,000.00		23,000.00
Sinking Funds for Funded Water Debts	639,307.59	642,549.52	3,241.93	
Net Funded Water Debt	235,692.41	209,450.48		26,241.93
Serial Water Debt	225,000.00	204,500.00		20,500.00
Net Water Debt	460,692.41	413,950.48		46,741.93

RECAPITULATION

Amount of City Loans upon which interest is at 4½%	$1,129,800 00	
Amount of City Loans upon which interest is at 4%	3,381,000 00	
Amount of City Loans upon which interest is at 3½%	4,255,650 00	
Amount of City Loans upon which interest is at 3%	100,000 00	
Total Funded and Serial City Debt		$8,866,450 00
Amount of Water Loans upon which interest is at 4%	786,500 00	
Amount of Water Loans upon which interest is at 3½%	270,000 00	
Total Funded and Serial Water Debt		1,056,500 00
		$9,922,950 00

Temporary Loans for the Past Ten Years and Interest Upon the Same

Year	Temporary Loan	Interest paid upon Loan	Year	Temporary Loan	Interest paid upon Loan
1910	$395,000.00	$3,679.44	1915	$1,650,000.00	$15,398.66
1911	400,000.00	3,927.62	1916	1,650,000.00	23,921.76
1912	500,000.00	5,426.03	1917	3,215,000.00	47,893.19
1913	400,000.00	7,432.77	1918	2,050,000.00	60,660.91
1914	1,145,000.00	13,518.04	1919	2,100,000.00	60,784.68

ANNUITIES AND TRUST FUNDS

(Acts 1904. Chapter 322)

AN ACT TO PROVIDE FOR THE AUDITING OF CERTAIN TRUST FUNDS AND ACCOUNTS

Be it enacted, etc., as follows:

Section 1. It shall be the duty of city and town auditors at least once every year, and so much oftener as they may deem it necessary, to audit the accounts of the trustees of any property, the principal or income of which, in whole or in part, was bequeathed or given in trust for the benefit of the inhabitants of the city or town or any part thereof, and to examine and estimate the funds, securities and evidences of property held by such trustees. City and town auditors shall include in their annual reports a report of such auditing and investigation; and if they discover any fraud or irregularity they shall immediately report the same to the mayor and treasurer of the city or to the selectmen and treasurer of the town.

Section 2. It shall be the duty of the trustees designated in Section one hereof to give city and town auditors free access to their accounts, funds, securities and evidences of property; and any such trustee who refuses to exhibit his trust accounts, funds, securities and evidence as aforesaid shall be subject to a fine of not less than fifty nor more than two hundred dollars.

Section 3. This act shall be construed as applying only to property held in trust for public uses. (*Approved May* 9, 1904.)

Under the provisions of the foregoing Act, I hereby certify that I have examined the accounts, vouchers and securities belonging to the Trust Funds held for public uses, and find them correct and in excellent condition.

Attest:

CHARLES H. THURSTON, *City Auditor.*

April 1, 1920.

ANNUITIES

	Original Gift	Annual Interest
Daniel White Charity Annuity	$5,000	$300
Dowse Institute "	10,000	600
Sanders Temperance "	10,000	600
	$25,000	$1,500

DANIEL WHITE CHARITY ($10,360.00)

Established by Daniel White, of Charlestown, in his lifetime for the purchase and distribution of fuel among the deserving poor of Cambridge, his native city.

May 15, 1863, he appointed four trustees, with the Mayor of Cambridge, *ex officio*, to distribute not exceeding $300 per year. The trustees fill any vacancies in their number, in case of death, etc. Ex-Mayor J. Warren Merrill added a bequest in cash and stocks to the value of $5,360, thus making the principal $10,360. The present permanent members are George E. Saunders, Walter F. Earle, Edmund Reardon and Fred B. Wheeler, and the fund is invested by the trustees.

Annuities—Continued

Report of the Treasurer of the Daniel White Charity Fund

Receipts:		
Amount of Fund, January 30, 1919		$11,189 65
Interest received on city notes	500 00	
Interest received on bank balance	34 58	
Cash balance at beginning of year	829 65	
	$1,364 23	
Payments:		
Paid for fuel for poor	$481 55	
Cash balance at close of year	882 68	
	$1,364 23	
Principal	$10,000 00	
Cash in principal	$360 00	
Cash balance in bank, Jan. 29, 1918	882 68	
	$11,242 68	
Amount of Fund, March 31, 1920		$11,242 68

THE DOWSE INSTITUTE ($10,000)

The executors of Thomas Dowse, under a discretionary power in his will, gave to the city, on June 30, 1858, the sum of ten thousand dollars for an annual course of lectures, the city agreeing to pay to the trustees of said institute interest thereon at the rate of six per cent. per annum. The trustees consist of three permanent members, with the Mayor and the President of the City Council, for the time being. The original permanent members were appointed by the executors, and the board fills its own vacancies.

Report of the Treasurer of the Dowse Institute Fund

Receipts:		
Bank balance, March 31, 1919		$600 82
Received of City two years' interest		1,200 00
Received as interest on deposit with Cambridge Trust Co.		38 15
		$1,838 97
Payments:		
Riverside House Associates	$49 00	
School Centre work in co-operation with Cambridge School Committee	388 00	
Moving Picture Booth—Thorndike School	305 62	
		742 62
Balance in bank, March 31, 1920		1,096 35
		$1,838 97

THE SANDERS TEMPERANCE ANNUITY ($11,100)

This sum was given to the City by the will of Charles Sanders, of Cambridge, who died April 7, 1864, for the support of a missionary to promote the cause of temperance. The trustees consist of the Mayor and President of the City Council. The City pays a missionary $600 a year to carry out the provisions of the will.

Owing to vacancy in office of City Missionary caused by the death of Mr. Hicks in January, 1916, there has been no payments on this fund since that date.

Annuities—Concluded

THE HOPKINS FUND (£500)

Edward Hopkins died in London, England, in 1657 or 1658, leaving £500 to be used, upon the death of his widow, to aid a college and school in New England. The Court of Chancery gave it to Harvard College and a school in Cambridge. One-fourth of the net income is paid annually to the city for classical instruction in the Latin School. The trustees are a corporation established in Boston.

TREASURER'S REPORT OF HOPKINS FUND

Amount on hand, March 31, 1919		$946 85
Interest accumulations on deposit		34 11
Received from Treasurer of Hopkins Fund		825 77
		$1,806 73
Individuals	$250 00	
Paid to the City of Cambridge for tuition	160 00	
Paid to the School Department, for supplies	183 25	
		$593 25
Balance, March 31, 1920, Harvard Trust Company		$1,213 48
		$1,806 73

HENRY F. LEHAN, *City Treasurer.*

March 31, 1920.

THE TRUST FUNDS

CEMETERY FUND FOR PERPETUAL CARE OF LOTS

Held in trust by the City comprising sums received from the proprietors of lots in Cambridge Cemetery for the perpetual care of their lots therein. The fund is almost all invested in City of Cambridge registered bonds. First established in 1860.

Amount of Bonds in fund, March 31, 1919	$126,050 00	
Amount of Bonds purchased to March 31, 1920	121,000 00	
	$247,050 00	
Amount of Bonds that matured and sold during year 1919–1920	$120,300 00	
		$126,750 00

CASH ACCOUNT

Dr.

Cash on hand, March 31, 1919	$715 94	
Received from proprietors of lots for perpetual care	3,090 25	
Received from interest on investments	6,543 90	
Received from matured bonds	6,300 00	
Received from bonds sold	106,557 01	
		$123,207 10

Cr.

Cash paid for bonds	$115,584 58	
Paid to Cemetery Trustees for care of lots in perpetual care	6,543 90	
Balance on hand, March 31, 1920	1,078 62	
		$123,207 10

The Trust Funds—Continued

Registered Bonds	$126,750 00	
Deposit in Harvard Trust Co.	1,078 62	
		$127,828 62
Fund for Perpetual Care	$127,396 62	
Fund for Deeds in Trust	432 00	
		$127,828 62

CEMETERY FUND: DEEDS IN TRUST

Held in trust by the City, comprising sums received from the proprietors of lots in Cambridge Cemetery for the furtherance of certain trusts mentioned in conveyances of lots to the City in trust.

The fund amounts to $432.00, and was first established March 11, 1901.

Included in investment of Perpetual Care Fund	$432 00

THE BRIDGE CHARITABLE FUND

Founded by the late Levi Bridge of Cambridge, in his lifetime, by a deed of trust dated Aug. 12, 1875, and upon his death (April 15, 1876), the amount of said fund came into the hands of the City. In October, 1877, Mr. Samuel F. Bridge, a relative of the founder, gave a sum sufficient to double the amount. When the fund reached two thousand dollars, one-third of the income was to be added to the principal and two-thirds paid over annually to the Overseers of the Poor, to be expended for the deserving poor of Cambridge. The trustees consist of the Mayor and the President of the City Council. The City Treasurer is custodian of the Fund.

Amount of Fund, March 31, 1919		$2,758 69
Interest to March 31, 1920	$111 42	
Two-thirds income paid to Overseers of the Poor	74 28	
One-third income paid to Fund		37 14
Balance deposited in Central Trust Co., March 31, 1920		$2,795 83

Two-thirds of the income amounting to $74.28 was paid to the Overseers of the Poor, and the balance, $37.14, was added to the principal, leaving a balance of $2,795.83 in the hands of the City Treasurer. Said sum is deposited in the Central Trust Company and bears interest at the rate of four per cent. per annum.

HENRY F. LEHAN, *City Treasurer.*

March 31, 1920.

CITIZENS' SUBSCRIPTION FUND ($5,500)

In 1889, a committee of citizens raised by subscription a fund to enable the trustees to purchase a large number of books at the time the new Public Library building was opened. The unexpended balance (Fifty-five hundred dollars) was invested and the income is used for the same purpose.

Balance in bank, March 31, 1919	$123 16	
Receipts	296 49	
		$419 65
Expenditures		134 48
		$285 17

The Trust Funds—Continued

CITIZENS' SUBSCRIPTION FUND ($5,500)

Balance on deposit, March 31, 1920	$285 17
The principal is invested in Cambridge Sewer Bonds, Nos. 47 and 1150	$5,500 00

CUMMINGS LEGACY ($2,000)

As provided in the will of Daniel P. Cummings, who died May 3, 1889, the sum of two thousand dollars was paid over to the trustees of the Public Library, the annual income to be expended by said trustees in the purchase of non-sectarian books for the Public Library.

Balance on deposit, March 31, 1919	$54 36	
Receipts	35 00	
		$89 36
Expenditures		48 58
Balance on deposit, March 31, 1920		$40 78
The principal is invested in Cambridge Sewer Bond No. 1102..		$2,000 00

FAY LEGACY ($1,000)

In accordance with the provisions of the will of Isaac Fay, who died December 29, 1872, the sum of one thousand dollars was paid to the trustees of the Dana Library (now the Cambridge Public Library) for the time being, "which sum shall be safely invested by said trustees, and the income thereof appropriated to the purchase of books for said Library."

Balance on deposit, March 31, 1919	$54 42	
Receipts	42 50	
		$96 92
Expenditures		56 89
Balance on deposit, March 31, 1920		40 03
The principal is invested in a Cambridge Schoolhouse Bond ..		$1,000 00

WILLIAM E. SAUNDERS FUND ($7,668.27)

In accordance with the will of Abigail L. Prentiss, the residue, after the termination of certain annuities, was paid to the Trustees of the Cambridge Public Library, the annual income to be used for the purchase of books to be placed in the William E. Saunders Alcove, and for the care of same. This alcove is assigned to books on genealogy.

Balance on deposit, March 31, 1919	$1,094 02	
Receipts	274 07	
		$1,368 09
Expenditures		862 97
Balance on deposit, March 31, 1920		505 12
The principal is invested in Cambridge bonds, Nos. 544 and 545		7,000 00
Deposited in Cambridgeport Savings Bank		668 27
		$8,173 39

The Trust Funds—Continued

JAMES A. WOOLSON FUND ($5,000)

By the bequest of James A. Woolson, the sum of five thousand dollars was paid to the Trustees of the Cambridge Public Library, the income only to be used for the purchase of books. In each book purchased there is placed an appropriate book-plate.

Balance on deposit, March 31, 1919	$360 08	
Receipts	175 00	
		$535 08
Expenditures		233 37
Balance on deposit, March 31, 1920		$301 71
The principal is invested in Cambridge Bond No. 701		$5,000 00

EDWARD H. WHORF FUND

Balance on deposit, March 31, 1919	$604 52	
Receipts	120 00	
		$724 52
Expenditures		33 23
Balance on deposit, March 31, 1920		$691 29
The principal is invested in three American Telephone and Telegraph Company bonds, Nos. 9755, 9756 and 9757		$3,000 00

WILLIAM PENN HARDING FUND ($1,000)

By a bequest to the City, on behalf of the Public Library, the sum of $1,000, in accordance with the will of William Penn Harding, the money was turned over to the City Treasurer. The annual income shall be paid to the Trustees of the Public Library and is to be expended in the purchase of recent books on science, art or travel of a popular and instructive character. Said bequest shall be designated the William Penn Harding Fund, which designation shall be printed in all the books so purchased.

Balance on deposit, March 31, 1919	$63 43	
Receipts	61 12	
		$124 55
Expenditures		36 63
Balance on deposit, March 31, 1920		$87 92
Principal deposited in East Cambridge Savings Bank		$1,000 00

TREASURER'S REPORT OF THE WILLIAM PENN HARDING FUND

March 31, 1914—Deposited in East Cambridge Savings Bank	$1,000 00
March 31, 1920—The interest on said fund, amounting to $45.50, was paid to the trustees of the Public Library, in accordance with the provisions of the gift.	
The passbook of the East Cambridge Savings Bank shows that on March 31, 1920, the amount on deposit was	1,000 00

HENRY F. LEHAN, *City Treasurer.*

March 31, 1920.

The Trust Funds—Continued

MEHITABLE C. C. WILSON FUND

Balance on deposit, March 31, 1919	$668 31	
Receipts	40 52	
		$708 83
Expenditures		10 62
Balance on deposit, March 31, 1920		$698 21

ABIGAIL W. HOWE FUND

Bequest, Jan. 3, 1919	$123 34	
Receipts	120 00	
		$243 34
Expenditures		66 52
Balance on deposit, March 31, 1920		$176 82
Principal in City of Cambridge Bonds		$3,000 00

SARAH E. RUSSELL FUND ($814.41)

As provided in the will of Sarah E. Russell, of Cambridge, who died October 6, 1897, the sum of eight hundred fourteen dollars and forty-one cents was paid to the City by the executors of the will, "the income therefrom to be annually expended in or towards providing a Christmas tree or Christmas gifts and entertainments for the inmates at the time of the Cambridge Almshouse." Mrs. Russell was the widow of Hon. Charles Theodore Russell, and the mother of Hon. William E. Russell, each of whom served the city as Mayor.

Amount of deposit, March 31, 1919	$814 41
Interest to March 31, 1920	37 04
	$851 45
Amount paid as per provision of bequest, Dec. 12, 1919	37 04
Balance in Cambridgeport Savings Bank, March 31, 1920	$814 41

Treasurer's Report of the Sarah E. Russell Fund

The amount of the bequest was $814.41, and was deposited in the Cambridgeport Savings Bank, where it now remains.

The interest accumulations, amounting to $37.04 to Dec. 1, 1919, have been paid to Mr. John T. Shea, Superintendent of the City Home, and were used as stipulated in the will of Mrs. Russell.

HENRY F. LEHAN, *City Treasurer.*

March 31, 1920.

The Trust Funds—Concluded

JOHN WESLEY FREESE FUND ($109.88)

This is a fund of $89.36 bequeathed by the late John Wesley Freese in November, 1914. This sum is to accumulate for twenty years, after which time not more than three-fourths of the annual income is to be expended for books or works of art for the Houghton School.

TREASURER'S REPORT, JOHN WESLEY FREESE FUND

Nov., 1914—Deposit Cambridgeport Savings Bank	$105 11
March 31, 1920—Interest on fund to date	4 77
March 31, 1920—Amount deposited in bank	$109 88

TAILINGS ACCOUNT TRUST FUND

This fund consists of various amounts due on payrolls and sundry drafts, which have remained in the hands of the Treasurer, awaiting payment to persons properly entitled to the same.

The amount of the Fund, March 31, 1919	$4,775 84	
Interest on Deposit to March 31, 1920	114 38	
	$4,890 22	
Balance on deposit Harvard Trust Co., March 31, 1920		$4,890 22

CITY AUDITOR'S STATEMENT OF PROVISIONS OF SECTION 1, CHAPTER 322, ACTS OF 1904

Under the provisions of Section 1, Chapter 322, Acts of 1904, I hereby certify that I have this day examined the accounts, vouchers and securities belonging to the within Trust Funds, held for public use and find them to be correct and in excellent condition.

Attest:

CHARLES H. THURSTON, *City Auditor.*

March 31, 1920.

TAXES

The amount of taxes assessed by the Board of Assessors on the real and personal estates and polls of Cambridge, April 1, 1920, was as follows:

Valuation of real estate		$118,722,700 00
Valuation of personal		17,937,691 00
		$136,660,391 00
Assessed at $28.30 per $1,000		$3,867,489 0653
31,093 polls at $2.00		62,186 00
		$3,929,675 0653

The tax is divided as follows:

For city purposes*		$2,722,849 67
Deficit in Overlays of previous years		11,642 32
Overlay		45,872 6253
		$2,780,364 6153

State assessments:

State	$316,580 00	
Sewerage	133,430 27	
Parks	78,766 14	
Charles River Basin	13,801 44	
Charles River Bridge, on account of bridge	25,820 04	
Alewife Brook	4,579 76	
Smoke nuisance	587 69	
Prevention of fires	1,918 61	
Boston Elevated Railway Deficit	392,185 34	
Army and Navy Bonus	18,994 80	
		986,664 09
County assessments		162,646 36
		$3,929,675 0653

Increase in real estate valuation	$547,000 00
Increase in personal valuation	1,551,707 00
Increase in real and personal valuation over 1918	$2,098,707 00
Decrease of 91 polls since last year	
Number of houses assessed	14,345 13/15
Number of horses assessed	2,123
Number of cows assessed	53
Number of bulls assessed	1
Number of acres of land assessed	4,180.8

*To meet the City expenses the estimate of income from various departments is added to this sum raised by taxation.

Statement of the valuations of the personal property and real estate of the City of Cambridge, with the number of polls, dwellings, and rate of taxation for the past twenty years:

Year	Polls	Personal	Real Estate	Total	Dwellings	Rate pe $1,000
1898	24,628	16,642,990	72,908,100	89,551,090	13,473	16 40
1899	24,995	16,991,995	74,550,800	91,542,795	13,588	17 10
1900	25,117	17,865,230	76,600,700	94,465,930	13,713	16 90
1901	25,306	17,648,575	78,568,300	96,216,875	13,846½	16 90
1902	25,680	17,742,985	80,396,900	98,139,885	13,8892-3	18 30
1903	25,749	17,708,510	87,063,400	104,771,910	13,833	16 90
1904	25,968	17,346,500	87,481,100	104,827,600	13,858	17 90
1905	26,696	15,994,100	87,851,500	103,845,600	13,893	19 00
1906	26,434	16,550,235	88,603,000	105,153,235	13,937½	18 60
1907	26,064	17,773,990	89,235,300	107,009,290	14,0181-5	18 80
1908	25,815	16,854,775	90,026,300	106,881,075	13,9695-6	20 10
1909	25,898	16,118,635	90,839,500	106,958,135	14,0105-6	21 00
1910	26,660	18,774,935	92,021,800	110,796,735	13,1501-3	20 10
1911	26,810	17,409,635	94,171,600	111,581,235	14,1311-3	19 90
1912	28,110	18,621,000	97,326,300	115,947,300	14,191	20 40
1913	28,297	19,977,190	101,155,100	121,132,290	14,2831-3	21 40
1914	28,620	23,054,995	104,836,400	127,891,395	14,5087-12	21 40
1915	28,858	23,096,810	107,014,000	130,110,810	14,4711-3	23 00
1916	28,939	23,381,270	108,258,300	131,639,570	14,4692-3	23 50
1917	29,127	14,660,200	116,868,400	131,597,962	14,390⅛	23 50
1918	31,184	16,385,984	118,175,700	134,520,700	14,415⅝	25 00
1919	31,093	17,937,691	118,722,700	136,660,700	14,345⅛	28 30

Abatements upon taxes for the past twenty years, and amount of tax uncollected March 31, 1920.

Year	Total Tax	Total Abatements	Amount of Tax uncollected March 31, 1920
1898	1,527,863 88	27,566 98	.....
1899	1,623,592 35	35,317 61	.....
1900	1,654,588 36	33,005 90	.....
1901	1,683,690 84	24,390 38	.....
1902	1,854,557 82	30,013 44	.....
1903	1,828,456 95	41,525 33	.....
1904	1,934,772 56	50,088 47	.....
1905	2,031,457 20	48,886 73	.....
1906	2,012,805 80	61,528 79	.....
1907	2,038,170 44	63,481 85	.....
1908	2,204,263 62	53,504 40	.....
1909	2,302,311 40	41,954 80	.....
1910	2,283,435 10	38,962 37	.....
1911	2,274,086 57	32,762 63	.....
1912	2,421,544 92	77,572 52	.....
1913	2,527,962 72	61,195 94	332 60
1914	2,806,390 01	66,369 44	506 62
1915	3,072,471 19	69,625 56	800 80
1916	3,162,823 18	56,269 48	33,357 05
1917	3,169,920 60	94,631 36	39,187 96
1918	3,426,410 10	81,869 60	217,567 50
1919	3,929,675 07	60,749 10	691,952 27

ABATEMENT CERTIFICATES ALLOWED BY BOARD OF ASSESSORS

Taxes, Real, Personal and Poll, 1919	$56,724 37
Taxes, Real, Personal and Poll, 1918	4,136 00
Taxes, Real, Personal and Poll, 1917	842 25
Taxes, Real, Personal and Poll, 1916	63 45
Street Watering Assessments, 1917	30 40
Street Watering Assessments, 1916	2 72
Moth Assessments, 1919	4 00
Moth Assessments, 1918	47
Moth Assessments, 1917	31
Moth Assessments, 1916	1 24
Total	$61,805 21

BORROWING CAPACITY

The valuation of estates in this City for the years 1917, 1918 and 1919 are the same as originally made by the Board of Assessors during those years, and the same figures were reported by that Board to the Tax Commissioners for each of the years respectively. These valuations were subject to changes in each year, after such report was made, as shown by the following:

Net valuations of estates in the City of Cambridge, for the past three years, after adding the amounts of all supplementary warrants and deducting therefrom all abatements up to and including December 31, 1919:

Year	Total Valuation	Abatements	Net Valuation
1917	$132,437,600 00	$5,180,000 00	$127,257,600 00
1918	134,595,044 00	2,046,740 00	132,548,304 00
1919	136,752,491 00	1,819,200 00	134,933,291 00
	$403,785,135 00	$9,045,940 00	$394,739,195 00

Showing an average valuation for the years 1917, 1918, and 1919 of $131,579,731.66.

This sum represents the amount upon which the limit of municipal indebtedness is fixed under provision of Section 12 of Chapter 719, of the Acts of 1913.

Two and one-half per cent. (2½%) on same is			$3,289,493 29
Entire City Debt on December 31, 1919 was $8,866,450 00			
Of this amount the following loans are "Outside" the legal debt limit, being exempted by the following Acts of Legislature:			
Cambridge Bridge Loan:			
Acts of 1898, Chap. 467, Funded..	$1,640,000 00		
Acts of 1898, Chap. 467, Serial...	52,000 00		
Brookline Bridge Approach:			
Acts of 1898, Chap. 467, Funded..	25,000 00		
Acts of 1898, Chap. 361, Funded..			
Commercial Avenue Bridge:			
Acts of 1903, Chap. 372, Funded....	50,000 00		
Cambridge Bridge Special Loans:			
Charles River Dam:			
Acts of 1904, Chap. 158, Funded....	28,000 00		
Harvard Bridge Loan:			
Acts of 1887, Chap. 282, Funded..			
Acts of 1888, Chap. 73, Funded..	75,000 00		
Acts of 1891, Chap. 316, Funded..			
Park Loan:			
Acts of 1892, Chap. 341, Funded..			
Acts of 1893, Chap. 337, Funded..			
Acts of 1894, Chap. 89, Funded..			
Acts of 1897, Chap. 469, Funded..	1,600,000 00		
Acts of 1899, Chap. 221, Funded..			
Acts of 1912, Chap, 578, Funded..			
Acts of 1912, Chap. 578, Serial...	83,000 00		
Sewer Loan:			
Acts of 1899, Chap. 473, Funded..			
Acts of 1899, Chap. 189, Funded..	399,000 00		
Acts of 1903, Chap. 383, Funded..	267,000 00		
Acts of 1903, Chap. 383, Serial...	60,500 00		
Amount carried forward.....	$4,279,500 00	$8,866,450 00	$3,289,493 29

Borrowing Capacity—Concluded

Amount brought forward		$4,279,500 00	$8,866,450 00 $3,289,493 29
Hospital Loan:			
Acts of 1895, Chap. 99, Funded	150,000 00		
Cambridge City Hospital Loan:			
Acts of 1911, Chap. 545, Serial	117,000 00		
Acts of 1919, Chap. 103, Serial	150,000 00		
Metropolitan Park Assessment:			
Acts of 1908, Chap. 367, Funded	46,000 00		
Playground Loan:			
R. L. Chap. 27, Sec. 11, Funded	95,000 00		
R. L. Chap. 27, Sec. 11, Serial	25,800 00		
Charles River Basin Assessment:			
Acts of 1911, Chap. 463, Funded	60,000 00		
		$4,923,300 00	
Available "Inside" Debt Limit			$3,986,150 00
The entire Sinking Fund is		$3,345,431 84	
Of this amount there should be deducted on account of Exempted Loans as follows:			
Cambridge Bridge	$363,379 88		
Harvard Bridge	107,981 33		
Brookline Bridge	107,891 33		
Commercial Ave. Bridge	11,096 46		
Park	818,789 07		
Improved Sewerage	214,966 58		
Hospital	63,481 80		
Met. Park Assessment	23,705 97		
Cambridge Bridge Special	12,279 21		
Sep. System of Drainage	81,184 41		
Camb. Bridge, B. E. R.	257,500 00		
Playgrounds	22,860 54		
Charles River Basin	50,123 65		
Sinking Fund of Exempted Loans		2,032,897 09	
Leaving Sinking Fund for General Loans			1,312,534 75
Net City Debt, December 31, 1919			2,673,615 25
Borrowing Capacity for City purposes for 1920			$648,878 04

1919 VALUATION AND TAX LEVY

	Personal	Res. Banks	Personal With Banks	Real Estate	Total Without Banks	Total With Banks	Moths
	5,495,600		5,495,600	27,339,500	32,835,100	32,835,100	
	1,602,400		1,602,400	17,406,000	19,008,400	19,908,400	
	2,680,900		2,680,900	16,539,200	19,220,100	19,220,100	
	2,897,400		2,897,400	17,883,900	20,781,300	20,781,300	127.68
	1,445,000		1,445,000	18,844,600	20,289,600	20,289,600	155.67
	3,730,500	85,891	3,816,391	20,709,500	24,440,000	24,525,891	185.83
	17,851,800	85,891	17,937,691	118,722,700	136,574,500	136,660,391	469.18

Bank	Resident	Non-Resident
Lechmere National.....	$41,266	$52,734
Manufacturers National...	44,625	105,375
Totals.....	$85,891	$158,109

Polls, $31,093

WARRANTS

City.....	$2,722,849.67
Deficits in Overlays.....	11,642.32
County.....	162,646.36
State.....	316,580.00
Metropolitan Parks.....	78,766.14
Metropolitan Sewer.....	133,430.27
Charles River Basin.....	13,801.44
Charles River Basin on Account of Bridge.....	25,820.04
Alewife Brook.....	4,579.76
Prevention of Fires.....	1,918.61
Army and Navy.....	18,994.80
Gas and Smoke.....	587.69
Boston Elevated Deficit.....	392,185.34
Total.....	$3,883,802.44
Overlay.....	45,872.6253
Total.....	$3,929,675.0653

SCHEDULE B

No. IX

LIST OF CITY PROPERTY

AS FURNISHED BY

Executive Boards and Heads of Departments

FOR YEAR

1919----1920

LAW DEPARTMENT

1 roll top desk and chair	$25 00
Revised Laws, Public Statutes, etc.	15 00
Massachusetts Digest, Dillon on Municipal Corporations, and other law books	75 00
2 filing cabinets	100 00
Typewriter	100 00
Book case	30 00
Desk and chair	40 00
	$385 00

PUBLIC PROPERTY DEPARTMENT

CITY BUILDINGS

	Feet of Land	Purchase of Land	Erection of Buildings	Valuation of Land	Valuation of Buildings	Valuation of Furniture
City Hall	47,878	1888	1888	$100,000	$180,000	$34,800
Brattle Sq. Building	16,153	1873	1874	35,700	60,000	2,500
Central Sq. Building	13,028	1872	1873	13,000	60,000	2,436
Station 3	4,220	1862	1870	2,500	17,800	800
Station 4	6,316	1872	1873	5,600	21,200	300
				$156,800	$339,000	$40,836

Voting booth, corner, Cambridge and Hampshire Streets	$500 00	
Five portable voting booths	2,500 00	
Voting compartments and fixtures (500)	2,500 00	
		$5,500 00

PERSONAL PROPERTY

1 Ford touring car and equipment	$400 00

PROPERTY IN USE BY THE POLICE DEPARTMENT

Following is a list of property owned by the Police Department for the year 1920:

3	ambulances	$3,300 00	1	motorcycle	200 00
1	automobile	1,800 00	1	private telephone	200 00
4	book cases	25 00	8	pair handcuffs	24 00
1	bicycle	15 00	1	pair leg irons	5 00
33	blankets	45 00	7	pails	2 00
1	Bertillion book	1 00	190	police belts	190 00
10	beds and bedding	20 00	193	police badges	160 00
1	camera and stand	100 00	200	police clubs	200 00
4	card indexes	300 00	2	pulmotors	200 00
1	copy press	5 00	195	patrol box keys	55 00
49	chairs	60 00	18	roll top desks	270 00
10	clocks	20 00	3	rugs	7 50
21	cuspidors	10 00	180	revolvers	1,800 00
1	couch	3 00	200	rules and regulations	175 00
6	directories	36 00	2	settees	3 00
190	diaries	190 00	3	safes	45 00
4	electric desk lamps.	20 00	30	sheets	30 00
3	grappling irons	3 00	2	straight jackets	2 00
6	galvanized cans	12 00	6	stretchers	12 00
1	horse blanket	2 00	7	sets of law books	35 00
3	ice water tanks	9 00	4	sets of first aid charts	20 00
15	ink stands	5 00		trays and graduates	5 00
1	letter scale	1 00	2	wardrobes	10 00
10	lanterns	10 00	13	waste baskets	15 00
3	medicine cabinets	15 00	200	feet of rope	20 00
10	mirrors	10 00			
5	maps	1 50			$9,704 00

Yours respectfully,

JOHN J. McBRIDE,

Chief of Police.

FIRE DEPARTMENT

REAL ESTATE

Buildings	Location	Land Purchase	Erection of Buildings	Land, Sq. Feet	Assessed Value	
					Land	Buildings
Engine House No. 1	108 Mt. Auburn St....	.....	.....	In City	Buildings	schedule
Ladder House No. 1	Eliot Square.....					
Engine House No. 2	384–391 Mass. Ave....	Owned by City	1893	10,000	$12,500	$24,000
Ladder House No. 3						
Engine House No. 3	35 Third Street.....	1895	1895	10,100	6,600	20,400
Engine House No. 4	Mass. Ave. and Blake St..	1896	1896	9,532	9,200	24,900
Engine House No. 5	Inman Square.....	Owned by City	1913–1914	6,000	7,000	48,000
Engine House No. 6	176 River Street.....	1890	1890–1891	4,994	3,000	12,000
Engine House No. 7	350 Main Street.....	Owned by City				
Engine House No. 8	Junction of Garden and		1894–1895	9,400	8,500	15,900
Ladder House No. 4	Sherman Street.....	1903	1904–1905	10,380	3,600	30,000
Chemical Engine House No. 1.....	5 Western Avenue.....	.....	.....	In City	Buildings	schedule
Chemical Engine House No. 2.....	167 Lexington Avenue..	1893	1894	15,262	4,900	6,200
Ladder House No. 2	276 Portland Street.....	Owned by City	1887	7,610	4,900	12,000
					$60,200	$193,400

PERSONAL PROPERTY

Estimated Value, March 31, 1917

Apparatus	$120,646 00	
Bedding, etc.	7,500 00	
Hardware and tools	1,000 00	
Horses and harness	7,000 00	
Miscellaneous	1,500 00	
		$137,646 00

FIRE ALARM AND POLICE TELEGRAPH

ELECTRICAL DEPARTMENT, WIRE ACCOUNT, EQUIPMENT

Fire alarm apparatus and machinery	$20,000 00	
Fire alarm and police telegraph circuits	10,000 00	
147 Fire alarm boxes	12,715 00	
Police signal apparatus and machinery	4,000 00	
100 police boxes	11,150 00	
Police signal reserve apparatus	100 00	
Testing instruments	150 00	
Tools	200 00	
Stock on hand	500 00	
Automobile truck	650 00	
Ford runabout	150 00	
Touring car	600 00	
Office furniture	300 00	
		$60,515 00

HEALTH DEPARTMENT

REAL ESTATE

799 Concord Avenue—Tuberculosis Hospital

Value of buildings	$92,600 00	
Value of land	9,800 00	
		$102,400 00
Linen and bedding	$2,500 00	
Instruments and nursing utensils	100 00	
Dishes and kitchen utensils	300 00	
General furnishing	4,000 00	
		6,900 00
		$109,300 00

PERSONAL PROPERTY

In office:		
7 desks and 6 desk chairs	$150 00	
Card cabinet and letter files	650 00	
Dictionary and 3 atlases	25 00	
Typewriting machine and desk	20 00	
Stationery and sundries	125 00	
Medical books	20 00	
Duplicator and supplies	20 00	
Disinfecting apparatus and supplies	25 00	
		1,035 00
In laboratory:		
Microscope	$75 00	
Incubator and thermo-regulator	35 00	
Sterilizing oven	2 25	
Centrifuge	10 00	
Test tubes	5 00	
Diphtheria, sputum, and typhoid outfits	175 00	
Laboratory supplies	15 00	
Cards, card cabinet, stamps and stamp rack	35 00	
		352 25
At stable and garage:		
Ambulance	$2,000 00	
Wheels and runners	50 00	
Ambulance blankets	25 00	
		2,075 00
		$112,762 25

INSPECTION OF MILK AND VINEGAR

In laboratory:		
Electric centrifuge	$40 00	
Intermission refractometer	100 00	
Zeiss refractometer	75 00	
Drying oven	6 00	
Water bath	5 00	
Polariscope	20 00	
Analytical balance and weights	45 00	
Platinum dishes (9)	400 00	
Amount carried forward	$691 00	

Inspection of Milk and Vinegar—Concluded

Amount brought forward	$691 00	
Chemicals and glassware	20 00	
Office furniture (desk and chairs)	10 00	
Discarded apparatus	5 00	
High speed centrifuge (1)	25 00	
Autoclave and furnishings	100 00	
Milk collecting outfit	15 00	
Apparatus for plating bacteria	8 00	
Petri dishes	5 00	
		$879 00
In modified milk room:		
Galvanized iron sterilizing closet (1)	$5 00	
Milk cooling ice box (1)	5 00	
Station signs	1 00	
Bottles and stoppers	24 00	
42 galvanized iron bottle rack	12 00	
38 wooden cases	10 00	
7 stock pots	7 00	
5 baby scales	5 00	
3 gas stoves	1 00	
3 boilers	3 00	
1 bottle filler	1 00	
5 tables	2 00	
Index cards	50	
		$76 50

CAMBRIDGE CEMETERY

61,113 acres of land	$66,900 00	
1 office building	2,500 00	
1 house	3,500 00	
1 stable and shed	1,000 00	
Steel storage shed	600 00	
Personal property	5,000 00	
		$79,500 00

MUNICIPAL HOSPITAL

Land—Cambridge St., Lime St. and Camelia Ave.	$61,200 00	
Old buildings	14,000 00	
New buildings	100,000 00	
Instruments and apparatus	7,000 00	
Furnishings and equipment	20,000 00	
		$212,200 00

SEALER OF WEIGHTS AND MEASURES DEPARTMENT

INVENTORY OF PROPERTY

Standards furnished by the Commonwealth.

1 Balance—5 grains to 100 lbs.
1 Set (5) Avoirdupois Weights, 50-lb., 25-lb., 10-lb., 5-lb.
1 Set (11) Avoirdupois Weights, 4 lb. to 1-16 oz.

SEALER OF WEIGHTS AND MEASURES—Continued

1 Kilogramme in case.
1 Steel Meter in case.
1 Brass Yard Measure.
1 Set (5) Iron Dry Measures, 1-2 bush. to 1 quart.
1 Set (6) Iron Liquid Measures, 1 gallon to 1 gill.

OFFICE FURNITURE

1 Roll Top Desk
1 Black Walnut Desk
5 Chairs
1 Table
1 Clothes Press
1 Scale Cabinet
1 Wooden Cabinet
2 Benches
1 Sink
5 Mats
1 Set Revised Laws
1 Set Card Records—Oak Case
1 Set Card Index—Oak Case
1 Hektograph
1 Letter Press
1 Blotter Bath

MISCELLANEOUS

Miscellaneous books	$200 00
1 Express Wagon	100 00
1 Light Wagon	85 00
1 Pung	23 00
2 Harnesses	70 00
3 Plush Robes	24 00
1 Stable Blanket	2 00
1 Rain Blanket	2 00
1 Woolen Blanket	8 00
1 Halter	75
1 Hitch Weight	50
1 Balance Scale	88 69
1 Platform Scale, 1-2 to 2,500 lbs.	75 00
1 Folding Platform Scale, 1-4 lb. to 600 lbs.	30 00
1 Balance, 1-10 milligramme to 500 grammes	35 00
1 Balance, 1-50 grain to 1-2 lb.	15 00
1 Sealer's Balance, 1 grain to 100 lbs.	150 00
2 Leather tool bags	9 50
1 Sealer's Balance, 1 grain to 8 lbs.	50 00
2 Sealer's Trip Scales (not used)	5 00
1 Spring Scale, 1 lb. to 125 lbs.	1 00
2 Sets (19) Avoirdupois Weights, 4 lb. to 1-8 oz.	10 00
1 Set (9) Troy Weights, 16 oz. to 1-8 oz.	3 00
1 Set (13) Metric Weights, 1 kilo to 1 gramme	5 00
5 Boxes Miscellaneous Weights (not standardized)	10 00
1 Set (3) Iron Weights, 25-lb., 10-lb., 5-lb.	5 00
40 50-lb. Weights	100 00
1 Arch	2 00
3 Glass Graduates	1 00
2 Ford automobiles	1,093 79
4 Sets Apothecary Weights	26 00
1 Set (21) Grain Weights, 1,000 gr. to 1-1000 gr.	13 50
1 Set (21) Metric Weights, 50 gram to 1-10	13 50
1 Set (5) Copper Dry Measures, 1-2 bushel to 1 quart	45 00
1 Set (3) Brass Dry Measures, 1 quart to 1-2 pint	5 00
2 Sets (14) Copper Liquid Measures, 1 gal. to 1 gill	30 00
Amount carried forward	$2,337 23

Sealer of Weights and Measures—Concluded

Amount brought forward	$2,337 23
1 Yard Measure	1 50
1 Iron Truck	5 00
1 5-gal. Copper Measure	15 00
1 Steel Tape	10 00
1 Pair of Inside Calipers	3 50
1 Set Brands	3 00
1 Plumbers' Furnace	5 00
Miscellaneous Tools	50 00
1 Wagon Scale (Lechmere Square)	400 00
3 Record Books	15 00
2 bracing chains	18 00
	$2,863 23

CITY HOME

Thirty-two acres land bought August 7, 1849.

Present City Home completed and placed under the care of the Overseers of the Poor, April 3, 1851.

Land cost	$12,000 00
City Home cost	32,970 69
Fences, furniture, etc., cost	3,000 00
Total	$47,970 69
Hospital cottage on City Home ground built in 1886, moved and rebuilt in 1901, cost	$2,800 00
Two-story brick building erected 1888, cost	5,600 00
Alterations and Addition to City Home, 1916	57,711 95
Land situated in Cambridge	14 242-1000 acres
Land situated in Somerville (1 1-2 taken by State)	4 454-1000 "
Lands (salable) on plan of April 10, 1884:	
30 lots of 5,000 ft. each (in Somerville)	3 443-1000 "
Total acres of land	24 139-1000 acres

About seven acres of City Home land lying south of Broadway in West Somerville have been sold for house lots. The remaining lots (30) contain 150,000 square feet, and have been held at a valuation of four cents per square foot, but at the present time are assessed for about ten cents.

The valuation of the City Home real estate by the assessors is:

Land in Cambridge	$52,200 00
Buildings in Cambridge	43,300 00
Land in Somerville	39,700 00
Buildings in Somerville	3,200 00
Total	$138,400 00

INVENTORY OF PERSONAL PROPERTY AT CITY HOME

April 1, 1920

Bookkeeping account books, stationery, etc.	$150 00
Drugs, medicines and hospital supplies	200 00
Dry goods, clothing, bedding, furniture, carpets, etc.	6,000 00
Groceries and provisions	1,500 00
Amount carried forward	$7,850 00

CITY HOME—Concluded

Amount brought forward	$7,850 00
Farm and Stable:	
2 horses, 32 fowls, 350 hot-bed sashes, 50 straw mats, 150 shutters, 5 wagons, 3 pungs, 4 harnesses, farming implements, tools, fertilizer, etc.	3,000 00
Total	$10,850 00

INVENTORY OF PERSONAL PROPERTY AT OVERSEERS' OFFICE, CENTRAL SQUARE BUILDING, April 1, 1920

Office furniture, filing cases, bookcases, typewriters, books, stationery, etc.	$700 00
City Physician's office—Instruments, microscope, operating table, furniture, medicine, etc.	350 00
Total	$1,050 00

ENGINEERING DEPARTMENT

PERSONAL PROPERTY

7 books at $3.00 each	$21 00
46 vols. engineering papers, at $2.50 each	115 00
4 logarithm books	4 00
1 pantagraph	10 00
2 planimeters, at $20.00 each	40 00
2 numbering machines, at $5.00 each	10 00
1 typewriter	50 00
Drawing instruments, pens, compasses, etc.	50 00
Drawing materials and paper	15 00
Wye level	50 00
Dumpy level, $40, hand level $5.00	45 00
2 transits, at $100.00 each	200 00
Level, line and sounding rods	45 00
5 tapes	10 00
Testing pans, moulds, etc.	10 00
Testing machinery	25 00
Electric motor	4 50
Furniture in office	200 00
Photograph outfit	100 00
Rain gauges, standard and self-recording	75 00
Plans (estimated value) 13,503 at $10	135,030 00
478 field, survey, line and level books, estimated value $20.00	9,560 00
62 house books, estimated value $10.00	620 00
Total	$146,289 50

SEWER DEPARTMENT

REAL ESTATE

Location	Buildings	Erected	Purchased	Feet of Land	Assessors' Valuation of Land	Assessors' Valuation of Buildings
Pilgrim Street.....	Stable	1887 1881				
Pilgrim Street.....	Sheds	1884 1892				
Pilgrim Street.....	House	1890	1868	23,707	$12,800	$4,300
				Total....	$17,100	

SEWERS

162,978/1000 miles of sewers, which have cost to construct .. $2,643,629 21

SEWER DEPARTMENT

PERSONAL PROPERTY—1920

2	C. B. cleaning carts, iron	$150 00
1	sump cart	18 00
1	tip cart (four-wheel)	15 00
1	tip cart	15 00
1	wagon express	15 00
1	dray	25 00
1	hoisting engine	135 00
2	gasoline pumps	150 00
1	gasoline tamping machine	60 00
2	ejectors	50 00
1	Ford truck, 1920, Model T	603 00
1	1-ton trailer for above	50 00
1	Ford touring car, 1919, Model T	500 00
1	Federal truck, 3½ tons, for cleaning C. B., 1917	4,500 00
1	Guarantee 2-ton hoist, 1918	500 00
2	sets harness and clothing for 2 horses	25 00
1	horse	150 00
1	pile driver and 2 hammers	80 00
4	hand pumps and hose	67 50
1	centrifugal pump	35 00
1	street roller (horse)	20 00
1	sewer cleaning machine, Healy	200 00
3	tool houses	50 00
4	doz. lanterns and globes	36 00
	Tools and implements, shovels, picks, etc.	300 00
	400 ft. flushing hose	200 00
	Stock on hand, brick, castings, lumber, pipe	200 00
1	Hauck thawing outfit	100 00
6	rubber hats	6 00
8	oil coats	25 00
10	oil pants	25 00
	Rubber boots	130 00
	Total	$8,435 50

STREET DEPARTMENT

INVENTORY OF REAL AND PERSONAL PROPERTY

Real Estate

Location	Buildings and Land	Erection of Buildings	Purchase of Land	Feet of Land	Valuation of Land	Valuation of Buildings
Raymond St....	City Yard and Stable, stable, sheds, scales etc.....	1897	1896	272,670	$27,300	$27,000
	Incinerator plant.....	1912	....	.....	.....	5,000
Hampshire St...	City Stable, sheds, stables and scales, including old police station.	1885	....	72,661	32,400	16,000
E. S. Norfolk St.	Yard and pound.....	.....	....	34,650	13,900	300
Acton, Mass....	Land, gravel bank.....	.....	1896	.....	3,000	.....
Main St.....	Land and incinerator plant.....	1908	....	52,000	32,700	11,200
					$109,300	$59,500

Total valuation of real estate..... $168,800.00

PERSONAL PROPERTY

110	horses	$30,000 00
15	watering carts	4,000 00
80	single and double carts	8,000 00
125	sets harness	2,000 00
2	concrete mixers	1,000 00
7	automobiles	3,500 00
3	five-ton trucks	8,000 00
4	steam rollers	12,000 00
22	Shadbolt carts	8,000 00
1	Watson cart	200 00
50	feet straight edgestone	50 00
30,000	second hand vitrified brick	600 00
25,000	second hand granite blocks	750 00
10,000	recut blocks	450 00
400	feet second hand flagging	200 00
50	tons crushed stone	100 00
	Oil storage, Portland Street	1,000 00
	Oil storage, Raymond Street	1,000 00
	Stone crushing plant, Raymond Street	1,000 00
	Furnace, Main Street incinerator	7,000 00
	Miscellaneous machinery	600 00
	Miscellaneous tools, road machines, brooms, scrapers, machine brooms, waste barrels, push carts, etc.	9,000 00
	Miscellaneous wagons, plows, pungs, etc.	2,000 00
	Stock of grain, hardware, paints, and general shop supplies	1,000 00
	Total	$101,450 00

BRIDGE DEPARTMENT

PERSONAL PROPERTY

Cambridge and Boston Bridges

Harvard Bridge	$750 00
Prison Point Bridge	750 00
River Street Bridge	500 00
Cambridge Bridge	100 00
	$2,100 00

SCHOOLHOUSES

	Feet of Land	Purchase of Land	Erection of Buildings	Valuation of Land	Valuation of Buildings
Agassiz	26,034	1874–1915	1875–1915	$11,800	$122,100
Boardman	10,018	1866	1868	4,500	17,500
Bridge	4,646	1836	1836	1,200	.....
Ellis	25,700	1897	1898	7,600	50,000
Felton	15,090	1847	1848	7,000	14,500
Fletcher	24,364	1902	1903	8,600	94,400
Gannett	15,434	1876	1886	3,100	7,800
Gore	9,900	1871	1871	5,000	25,100
Haggerty	46,642	1880	1914	8,200	45,300
Harvard	20,494	1870	1871–1899	11,800	71,800
High and Latin	74,366 79,579	 1894	1891 1897	92,500	689,200
Houghton	20,306	1904	1904–1905	7,500	124,500
Kelley	25,536	1900	1902	9,400	80,000
Lowell	12,033	1883	1883	5,500	6,500
Merrill	37,828	1864	1864	21,400	45,000
Morse	25,650	1889	1890	11,100	80,400
Parker	12,319	.....	1893	8,600	18,900
Peabody	37,296	1887	1888–1898	22,900	68,000
Putnam	14,400	1825	1889	8,700	65,900
Reed	12,000	1868	1868	1,700	4,000
Rindge Technical	97,128	.....	1887	48,700	78,300
Roberts	16,400	1898	1898	9,900	96,000
Russell	63,596	1895	1896	19,800	52,900
Shepard	14,755	1855	1856–1873	10,900	29,300
Sleeper	36,584	1894	1894	8,400	30,000
Tarbell	19,500	1878	1882	6,800	12,300
Taylor	25,278	1894	1895	9,300	37,500
Thorndike	41,273	1911	1912	14,400	100,000
Webster	35,508	1866	1873–1885	11,100	154,600
Wellington	27,673	1875	1884–1909	11,500	133,000
Washington Bldg	.....	.....	.....	14,400	138,200
Willard	20,079	1869	1870	8,000	26,100
Wyman	14,347	1871	1871–1886	4,600	5,900
				$435,900	$2,525,000

SCHOOL DEPARTMENT

PERSONAL PROPERTY

Text books	$61,899 88
Desk and reference books	1,624 40
Apparatus and machinery	23,817 91
Furniture and furnishings	108,366 76
Stock on hand in storeroom	3,340 84
Total	$199,049 79

PUBLIC LIBRARY

REAL AND PERSONAL ESTATE

141,666 feet of land, as per assessors' books	$85,000 00	
Library building, as per assessors' books	95,300 00	
		$180,300 00
Estimated valuation of books in the library	$90,000 00	
Estimated valuation of interior furnishings	8,000 00	
Estimated valuation of books in the East Cambridge Branch Library	4,000 00	
Estimated valuation of furnishings in the East Cambridge Branch Library	800 00	
Estimated valuation of books in the North Cambridge Branch Library	6,000 00	
Estimated valuation of furnishings in the North Cambridge Branch Library	1,400 00	
Estimated valuation of books in the Cambridgeport Branch Library	4,000 00	
Estimated valuation of furnishings in the Cambridgeport Branch Library	1,000 00	
Estimated valuation of books in the Cambridge Field Branch Library	2,500 00	
Estimated valuation of furnishings in the Cambridge Field Branch Library	800 00	
Estimated valuation of books in the Mount Auburn Branch Library	1,500 00	
Estimated valuation of furnishings in the Mount Auburn Branch Library	600 00	
		120,600 00
		$300,900 00

The lot (about 590x240 feet) occupied by the library building is bounded by Broadway, Irving, Cambridge and Trowbridge streets. The land and buildings were presented to the City of Cambridge by Mr. Frederick H. Rindge in June, 1889, on the completion of the building, which was begun in the autumn of 1887. In 1894 a wing was added to the building at a cost to the city of $20,000, and in 1902 an addition to the stack was made at an expense of about $30,000.

The trustees of the library also hold the following funds, invested in the bonds of the City of Cambridge:

Citizens' Subscription Fund:		
Sewer loan bond No. 1150, due May 1, 1940, 4 per cent.	$5,000 00	
Sewer loan bond No. 47, due Oct. 1, 1925, 4 per cent.	500 00	
		$5,500 00

PUBLIC LIBRARY—Concluded

Cummings Fund:		
Sewer loan bond No. 1102, due July 1, 1939, 3½ per cent. ...		2,000 00
Fay Fund:		
Schoolhouse loan bond, No. 254, due August 1, 1918, 3½ per cent.		1,000 00
William Penn Harding Fund:		
Deposited in East Cambridge Savings Bank, Book No. 58,916		1,000 00
William E. Saunders Fund:		
Building loan bond No. 544, due April 1, 1923, 3½ per cent.	$3,000 00	
Street loan bond No. 545, due April 1, 1923, 3½ per cent.	4,000 00	
Deposited in Cambridgeport Savings Bank ...	668 27	
		7,668 27
Edward H. Whorf Fund:		
Three American Tel. & Tel. Co. bonds, Nos. 9755, 56, 57, due July 1, 1929, 4 per cent.		3,000 00
Mehitable C. C. Wilson Fund:		
Deposited in the Harvard Trust Savings Bank		668 31
James A. Woolson Fund:		
Park loan bond No. 701, due April 1, 1945, 3½ per cent.		5,000 00
Abigail W. Howe Fund:		
Deposited in Harvard Trust Savings Bank		123 34
Three $1,000 Liberty Bonds, 3½ per cent.		3,000 00
Total		$28,959 92

PARK DEPARTMENT

LAND

River Parkway	Square Feet	Value
Section A from Bridge to Ames St.	395,174	$592,761 00
" B from Ames to Fowler	859,000	2,013,750 00
" C from Fowler to Brookline Bridge	583,082	174,924 60
" D from Brookline Bridge to River	1,668,709	200,245 08
" E from River to Western Ave.	77,101	77,101 00
" F from Western Ave. to Boylston	605,084	450,000 00
" G from Boylston to Stillman Inf.	699,948	560,000 00
" H from Stillman Inf. to Gerry's Land	62,858	31,500 00
Cambridge Field	528,154	264,000 00
Rindge Field and Nursery	501,729	107,400 00
East Cambridge Embankment	349,828	437,300 00
Commons and Squares:		
Garden Street, Massachusetts Avenue and Waterhouse Street	370,784	370,800 00
Massachusetts Avenue and Cambridge Street	67,944	135,900 00
Massachusetts Avenue and Holmes Place	20,956	41,900 00
Massachusetts Avenue and Waterhouse Street	13,180	19,800 00
Broadway Common	107,181	55,000 00
Fort Washington	42,123	21,100 00
Dana Square	33,531	18,000 00
Hastings Square	30,000	15,000 00
Winthrop Square	11,565	28,900 00
Arsenal Square	3,189	3,200 00
Pleasant and River Streets	1,569	900 00
Pleasant Street and Western Avenue	1,272	1,000 00
Massachusetts Avenue and Arrow Street	872	2,200 00
Longfellow Park	93,618	35,300 00
Old Burial Grounds—Massachusetts Avenue and Garden St.	85,858	173,100 00
Total		$5,831,081 68
Buildings		189,300 00
Equipment		4,600 00
		$6,024,981 68

CITY PROPERTY

MISCELLANEOUS REAL ESTATE

	Square Feet	Assessors' Value
Lot on northwest corner Main and First Streets	13,690	$24,600 00
" " Clifton Street	6,000	800 00
" " Reed Street	1,500	200 00
" " Portland Street	18,011	11,400 00
" " Harvard (near Prospect Street)	10,050	7,000 00
" " New Street (Old Hospital site)	30,940	2,300 00
" " Reservoir Street (Old Hospital site)	16,624	7,000 00
" " Holworthy Street	10,000	2,500 00
		$55,800 00

PLAYGROUNDS AND EQUIPMENT

LAND

	Square Feet	Valuation
Russell Field	882,410	$44,200 00
Houghton	11,804	4,900 00
Peabody	9,664	6,400 00
Morse	13,561	4,400 00
Wellington	8,144	3,400 00
Fletcher	10,187	4,100 00
Sargent and Fresh Air Lots	20,291	10,200 00
Thorndike Playground	23,575	7,300 00
Thorndike Field	113,246	39,600 00
Mill Pond	172,813	43,200 00
Ward 10 Playground	95,657	29,600 00
Ward 8 Playground, 1919	20,820	4,600 00
		$201,900 00

EQUIPMENT

To March 31st, 1920	53,953 36
Total	$255,853 36

SCHEDULE B

No. X

EXEMPTED PROPERTY

The following is a schedule of property used for religious, charitable and educational purposes, and exempt from taxation by law, including property owned by the County of Middlesex, not including that owned by the City of Cambridge, as shown on the Assessors' Books, March 31, 1920.

RETURN OF PROPERTY EXEMPTED FROM TAXATION IN THE CITY OF CAMBRIDGE
1919 1920

Name of Corporation	Description of Property	Valuation Real Estate	Valuation Personal
Apostolic Pentecostal Church of New England	2 Houses	1,700 00	
Avon Home	Building	33,700 00	198,728 33
Baptist Church in Cambridge and the Trustees of the Funds of the Baptist Church in Cambridge	Church	123,500 00	
Baptist Home	1 House & Stable	21,000 00	
Bishop, Leverett J., Wellington Bears, Hector McDonald, Geo. McDonald & Wm. C. Abbott, Trs. of the Church of Scotland, Unattached and George A. Richards, for tax	Church	9,900 00	
Board of Church Extension of the Church Extension Society of the African Methodist Episcopal Church	Church	9,200 00	
Boston Missionary and Church Extension Society of the Methodist Episcopal Church	Church	31,900 00	
Broadway Baptist Church	Church	23,000 00	
Brown, John S., Prescott Evarts and Samuel G. Babcock, Trustees of St. Bartholomew's Chapel in Cambridge	Church	17,900 00	
Browne & Nichols School, Inc.	School House Locker House	122,100 00	13,700 00
Buckingham School, The	School House	19,800 00	18,210 41
Burton, Joseph S. and Edward J. Sheffield and Chas. A. Swinterton, Trustees	Lot	3,400 00	
Cambridge Home for Aged People	Building	135,300 00	175,078 97
Cambridge Hospital	Hospital and Nurses' Home	438,100 00	317,317 48
Cambridge School for Girls, Inc.	School Bldg. House Lot	42,400 00	2,000 00
Cambridge Social Union	House & Hall	29,500 00	1,186 06
Cambridge Visiting Nursing Association	House	12,700 00	26,960 38
Cambridge Young Men's Christian Association	Building	235,000 00	29,686 25
Cambridge Young Women's Christian Association	Building	88,800 00	60,448 68
Christ Church, Episcopal	Church and Parish House	55,000 00	
Church of the Ascension	Church	11,300 00	
Columbus Day Nursery of Cambridge	House	3,400 00	1,207 35
Amount carried forward		$1,468,600 00	$844,523 91

Exempted Property—Continued

Name of Corporation	Description of Property	Valuation Real Estate	Valuation Personal
Amount brought forward		$1,468,600 00	$844,523 91
Congregation Agaduth Ashkenazine of Cambridge ...	2 Houses & Stable	8,300 00	
Congregation Beth Israel of Cambridge	Synagogue	36,000 00	
Co-operative Air School	School Bldgs.	13,500 00	2,192 31
Corporation of the New Church Theological School, The	Buildings & Lot	158,800 00	145,641 31
Cragwell, Alfred E., John Blackman Christian Mission	Building	8,300 00	
East End Union	Church	6,000 00	
Episcopal Theological School, Trustees of	Buildings	470,100 00	717,606 56
Epworth M. E. Church	Church	114,800 00	
First Church of the Evangelical Ass'n of N. America	Church	14,000 00	
First Evangelical Congregational Society	Church	27,700 00	
First Parish Unitarian	Church	132,000 00	
First Pentecostal Church of the Nazarine of Cambridge	Building	17,100 00	
First Reformed Presbyterian Church of Cambridge	Church	11,500 00	
First Swedish Baptist Church of Cambridge	Church	19,300 00	
First United Presbyterian Church of Cambridge	Church	13,900 00	
First Universalist Society of Cambridge	Church	30,900 00	
Grace, M. E. Church	Church	22,400 00	
Harvard Lampoon Club			2,500 00
Harvard St. M. E. Society ..	Church	61,200 00	
Hebrew Literary Ass'n of Cambridge and Somerville			
Blanche C. Leavitt, sidewalk assessment	Building	17,600 00	
Holy Ghost Hospital	Hospital Building	213,400 00	17,042 71
Immanuel Baptist Church ..	Church	35,800 00	
Lamson Home	House	7,000 00	
Longfellow Memorial Ass'n .			511 14
Massachusetts Association for Promoting the Interests of the Adult Blind	Building	29,900 00	12,719 72
Massachusetts Baptist Missionary Society	Church	19,300 00	
Mass., Commonwealth of	Building	747,400 00	
Mass., Commonwealth of and City of Cambridge for tax .	Lot	10,700 00	
Mass., Commonwealth of and City of Cambridge for tax and Mary M. Maguire for tax	Lot	23,000 00	
Massachusetts Institute of Technology	Buildings	6,475,600 00	10,381,422 00
Amount carried forward		$10,214,100 00	$12,127,159 66

Exempted Property—Continued

Name of Corporation	Description of Property	Valuation Real Estate	Valuation Personal
Amount brought forward		$10,214,100 00	$12,127,159 66
Middlesex College of Medicine and Surgery	Building	89,900 00	17,900 00
Middlesex, County of	Buildings	1,403,800 00	50,000 00
Mt. Auburn Cemetery Corporation	Pt. Cemetery	50,700 00	
North Avenue Baptist Church	Church	80,700 00	
North Avenue Congregational Society	Church	50,500 00	
Old Cambridge Baptist Society	Church	219,000 00	
Palfrey, John G., and Robert H. Gardiner, Tr. u/w of Mary Ann Palfrey	Drill Hall	100,000 00	
Pilgrim Congl. Church	Church	39,300 00	
President and Fellows of Harvard College	Buildings	12,625,400 00	24,548,164 68
Prospect Union Ass'n	Building	42,500 00	16,713 00
Radcliffe College	Buildings	1,050,800 00	2,019,578 09
Roman Catholic Archbishop of Boston	Buildings	1,047,500 00	1,500 00
Rush African M. E. Zion Church	Church	6,300 00	
Sacred Heart School Ass'n of Cambridge	Church	122,300	4,170 90
St. James Parish	Lot	9,700 00	
St. John's Literary Institute	Hall & Store	27,400 00	2,500 00
St. Mary's Parochial School	Buildings	361,700 00	
St. Paul's Roman Catholic Church	Church	64,000 00	
St. Paul's Roman Catholic Association	Bldg. & Church	216,300 00	4,000 00
St. Peter's Parish Hall Corp.	Building	18,400 00	2,000 00
St. Philip's Episcopal Church	Church	8,600 00	
Salvation Army of Massachusetts	Building	11,500 00	200 00
Shepard Congregational Society	Church	218,000 00	
Stratton, Charles F., Allan K. Sweet and Edwin S. Chapin, Trustees	Building	9,100 00	
Swedish Evangelical Lutheran Augustana Church	Church	18,900 00	
Swedish Evangelical Missionary Church of Cambridge	Church	27,200 00	
Third Congregational Society in Cambridge	Church	51,000 00	
Third Universalist	Church	78,000 00	
Trustees of Andover Theological Seminary	Building	381,700 00	802,412 37
Trustees of Donations to the Protestant Episcopal Church in the Diocese of Massachusetts	Church	19,600 00	
Amount carried forward		$28,663,900 00	$39,596,297 80

Exempted Property—Concluded

Name of Corporation	Description of Property	Valuation Real Estate	Valuation Personal
Amount brought forward		$28,663,900 00	$39,596,297 80
Trustees of Donations of the Protestant Episcopal Church	Church	92,800 00	
United States of America	Building	252,400 00	
Western Avenue Baptist Tabernacle Church	Building	3,500 00	
Wheelwright, John T., and Roger L. Scaife and Arthur H. Weed, Trustees	Building	13,800 00	
Wood Memorial Church, Congregational	Church	31,200 00	
Total		$29,057,600 00	$39,593,297 80

RECAPITULATION

Literary	$15,734,100 00	$28,303,085 93
Scientific	6,565,500 00	10,399,322 00
Charitable	906,000 00	749,254 94
Benevolent	332,900 00	90,134 93
Religious	2,931,100 00	1,500 00
Cemetery	50,700 00	
Miscellaneous	2,537,300 00	50,000 00
	$29,057,600 00	$39,593,297 80
Real Estate		$29,057,600 00
Personal		39,593,297 80
		$68,650,897 80

REPORT OF THE SCHOOL COMMITTEE

REPORT OF SUPERINTENDENT

I submit herewith my eighth annual report, which is the fifty-second in the series of annual reports by the superintendent, and the eightieth of the printed reports of the School Committee of Cambridge.

It is gratifying to be able to state that the work of the schools has been this year regularly and successfully completed.

The teaching force, sensing the situation properly, have worked with interest and enthusiasm and have done what was possible to make up for the interruptions caused by the war, by sickness, and by shortage of supplies.

Early in the year the School Board realized that prompt action was essential to the maintenance of the high standard in the teaching corps. To keep teachers in the profession, and to keep our best teachers in our schools, salaries must be adequate to the demands made upon them.

The ideal teacher is the product of real activities. Good schools are possible only when teachers are not only contented but happy in their content; not only prepared to teach, but teaching from a wealth of preparation increased by study, by social activity, by travel and by rest; not only free from present care but also assured of future independence. The Legislative Act by which the Cambridge teachers were given a substantial salary increase was just and necessary. School boards everywhere have increased salaries.

Continuation Schools

At the State election last November, Chapter 311 of the General Acts of 1919, regarding the establishment of compulsory Continuation Schools, was accepted by every city and town in the Commonwealth, except one. By the provisions of this Act, after September, 1920, employed minors under 16 years of age are required to attend Continuation Schools while they are in session for four hours a week. The schools are to be day time schools, in session during the same number of weeks as the high school, and held between the hours of 8 and 5, on week days, except Saturday. Employers must permit the

minors to attend, and time in attendance is counted as included in the time during which the minors may be employed (within the 48 hours a week).

In response to the request of the State Board of Education, a Director of Continuation Schools was appointed in January to organize the schools and to be ready to put them into operation in September next. After looking about for a building that would house these new pupils properly the Taylor School was selected. Here it is planned to hold the Girls' Division from 8 to 12 A. M. and the Boys' Division from 1 to 5 P. M.

The purpose of this Act is to give these boys and girls who have left school at an early age an appreciation of knowledge for its own sake; to help them to understand its value as a preparation for life; to give them a broader vision of their opportunities in life; in short, to help them in every way to become more intelligent, useful and contented citizens. While the pupil is its first consideration, the employer cannot help reaping the benefits of a better instructed and, we hope, a happier set of employees.

The Certificating Department and the Department of Vocational Guidance are so closely allied with the Continuation Schools that the State Board recommends, as the ideal arrangement, that these be housed together when possible. The Taylor School will easily accommodate these departments as part of the Continuation School.

Classes at Agassiz Museum

Since January the work of the Cambridge Museum Extension has had a home of its own in the building on Jarvis Street which, through the courtesy of Harvard University, the School Department is allowed to use as a Children's Museum. This is the first museum in the country to be opened especially for children under the auspices of a city School Committee. The official connection between museum and schools makes possible a very close co-operation.

The total number of children who have had lessons by the Museum teachers this school year is 8074. Miss Crawford has gone to each school to give the fourth grades a talk, illustrated, in the schools which have lanterns, by slides, and in all the schools, by materials brought from the Museum.

All the members of the fifth, sixth, and seventh grades, and three prevocational classes have come during school hours for lectures at the Agassiz Museum until Christmas; since then at the Chil-

dren's Museum. Seven eighth grades came for a special lecture by Professor Barton on "Greenland." Four have come for talks on "Birds." It is hoped that another year all the eighth grades as well as all the prevocational classes may come for Museum lectures.

By request two special series of talks have been given by Miss Tucker at the schools, four short talks on "Birds of Cambridge" at the morning assembly at the Agassiz School and a series of two lectures to the boys in first and second year science classes at the Rindge Technical School on "The Great Ice-Sheet in New England," with especial reference to the results of its work as seen around Cambridge and Boston and its effects on New England industries.

Great interest has been shown in the exhibits in the little Museum illustrating geography, industries, and natural history. The average attendance of children after school is 35 daily. The 150 books on the Museum shelves are at the disposal of the children and are eagerly sought. Museum clubs have been started to study birds, flowers, minerals. Much regret has been expressed by children, parents, and teachers that the Museum must be closed through the summer vacation, and much hope that this will never be the case again.

Gratitude is due to the committee of women who first suggested museum extension work in Cambridge for their continued support, both moral and financial, as well as to all others whom they have interested to help make this latest phase of the work a success.

Recommendations

The conditions in the Houghton, Webster and Morse districts have been improved by the addition of three rooms to the Morse School. A new building (to replace the Tarbell School) should be provided as soon as the hoped-for decline in cost of material and construction makes the project feasible. This would relieve the congestion in this district.

The High and Latin Annex, occupied for the first time in September, has made possible a much stronger organization of the school and has given the pupils for the first time in years proper accommodations in comfortable and well-lighted rooms. A central fire alarm and a bell system are now installed.

I hope it will be possible in the very near future to give better and more adequate accommodations to the pupils of the Rindge Technical School.

This school has had a decided increase in the past few years, and judging from the general demand for technical training, we must be prepared to meet the increased enrollment.

Department of Physical Education

I wish to call your attention to the report of the Director of Physical Education. Two years ago Miss Bickley was given charge of this department. The results of her work are highly gratifying. I trust that the Board will provide sufficient funds to equip this department properly.

Junior High School

I feel that the time has now arrived when the Junior High School has passed what might be called the experimental stage, and desire to make the following recommendation:

The Junior High School, or so-called Intermediate School, is a school which combines the last two grades of the elementary school system and the first year of the high school.

I recommend the adoption of the Junior High School plan for the following reasons:

1. Under the Junior High School system the aptitudes and abilities of the pupils are more easily discovered and provided for, owing to the greater freedom in choice of work which is allowed.

2. Junior High School work is carried on under departmental instruction. The advantages of having a teacher present but one subject, or but two at most, are many. Departmental instruction insures thoroughness and accuracy of scholarship and better methods of teaching. It also saves the time and energy of both teacher and pupil.

3. The Junior High School plan permits the earlier introduction of certain subjects which have heretofore been taught in the secondary schools only. It is true that, here and there, one or another of these subjects has been taught in the grades under the old organization, but the teaching is by no means general. Foreign languages represent one of the most distinctive of these introductions—French, Spanish, and Latin.

4. Most educators agree that it is better to begin the study of a foreign language in the 7th grade rather than in the 9th or 10th year. Bookkeeping, commercial arithmetic, typewriting and stenog-

raphy, algebra, industrial geometry, and general science all have a place in the new plan of Intermediate or Junior High Schools.

5. Another distinct advantage of the Junior High School is that the teachers deal with smaller groups, thereby securing more individual attention for each pupil.

6. The Junior High School bridges the gap now exisiting between the elementary school and the high school.

7. From 5% to 40% more pupils go on to the 9th year in Junior High Schools than under the old system. This fact is, to me, the most important consideration.

There are three arguments advanced by the opponents of the Junior High School system:

1. It is claimed that the pupils have to travel a longer distance. While this might be so in some cases, it is always a local problem; and, as the districts would be divided in Cambridge, it would make very little difference.

2. The second objection is that it costs more per pupil; this, I think, is true. The classes are smaller and new buildings and equipment will have to be provided; but the advantages are so great (especially that of keeping the pupils in school for a year or two longer) that they far overbalance the increase in cost.

3. The third objection is that the pupils are called upon at too early an age to decide what course is best for each individual. This disadvantage can be minimized and is most successfully overcome in those school systems where frequent conferences are held between teacher and parent and the needs and aptitudes and ability of the individual investigated.

There are several so-called Junior High School plans being tried out in various cities of the United States. There are the 6–2–4 plan, the 6–3–3 plan, and the 6–3–4 plan. The plan that is most successful and has the approval of the best men in the work is the 6–3–3 plan; that is, six years in the elementary grades, three years (7th, 8th and 9th) in the Junior High or Intermediate School, and three years in the Senior High School. This does not mean that all pupils who take this course will do the senior work in three years. All pupils do not now finish in four years. It would probably be necessary to provide for a four years' course also in the High School.

The best results are accomplished by having a separate building for the Junior High School in which the industrial and commercial arts are carried along with the regular high school work. I find that

the cities that have been most successful in working out this plan are the cities that have taken up the work very gradually. The city is divided into Junior High School districts; as each district grows, and additional accommodations are needed, the new building is built to accommodate a Junior High School; or, where there is a decrease in the number of pupils in a district, one of the buildings which is best adapted for a Junior High School is taken for that purpose. This is the procedure that I would recommend for the City of Cambridge.

The Morse, Webster and Houghton districts are the districts that are most in need of more and better school accommodations; the Russell and Haggerty school districts are the next to be provided for (as shown by the suggestive plan appended). If we adopt this plan we have ample time to train teachers and to provide a course of study, working with the seventh and eighth grades in these districts while suitable buildings and necessary equipment are being provided. This will in no way disorganize our present system.

If this plan is adopted, I propose to secure Professor Inglis of the Division of Education at Harvard University to train the teachers, as he is the best authority we have on the Junior High School. I also plan to secure the services of one or more of the professors of French and Spanish to train the teachers for this line of work. This training would retard the introduction of a course of study for the Junior High School for at least one year, but I believe that it would be a distinct educational advantage to the children of Cambridge. I find that 42 cities and towns in Massachusetts have already adopted some form of Junior High School.

While desiring to start the Junior High School as soon as possible, and while I am recommending that the School Committee adopt the plan, I realize that this is not the best time to ask for new buildings. Still, I feel that the work of preparation on the part of teachers and planning on the part of the officials should start at once.

While this plan of making the Junior High School a part of our system is being worked out, pupils from the 9th year of the Junior High School should pass to the second or sophomore year of the senior high school, while the pupils who did not take the 9th year course in our system should enter the freshman class just as at present, so that no pupil from any school in Cambridge need suffer on account of the adoption of this plan.

So far as I have been able to find out, all State Departments of

Education, all teachers' associations, principals' associations and superintendents' associations have endorsed this plan.

Following is a suggested curriculum organization for Junior High School, also a possible plan of organization for Junior High Schools in Cambridge:

Suggested Curriculum Organization for Junior High School

(Any course of study must be adapted to its particular district.)

GRADE 7

Studies	Periods
Constants:	
English	5
Geography and history	5
Arithmetic	5
Physiology and hygiene	3
Physical education	2
Practical arts	5
Total constants	25
Variables	5

GRADE 8

Studies	Periods
Constants:	
English	5
History and civics	5
General science	4
Mathematics	4
Physical education	2
Total constants	20
Variables	10

GRADE 9

Studies	Periods
Constants:	
English	5
Community civics	4
General science	4
Physical education	2
Total constants	15
Variables	15

POSSIBLE PLAN OF ORGANIZATION FOR JUNIOR HIGH SCHOOLS

Cambridge Public Schools

Enrollments in the 6th, 7th and 8th grades as of December, 1919

School	Number of Sections Grades 6	7	8	Total	Number of Pupils Grades 6	7	8	Total
Webster	4	6	6	16	208	211	184	603
Houghton	2	1	1	4	87	45	39	171
Morse	2	2	2	6	82	83	62	227
Putnam	3	3	3	9	92	72	57	221
Thorndike	3	2	2	7	52	37	30	119
Kelley	2	2	2	6	72	68	64	204
Wellington	3	3	2	8	123	103	75	301
Roberts	3	2	2	7	106	74	68	248
Fletcher	2	2	2	6	66	66	53	185
Harvard	3	3	3	9	139	115	103	357
Agassiz	2	2	2	6	59	53	52	164
Haggerty	1	1	1	3	36	34	26	96
Russell	2	2	2	6	94	54	62	210
Ellis	3	3	3	9	114	127	111	352
Peabody	2	2	2	6	81	63	58	202
Totals, Grades 6–8					1411	1205	1044	3660
Webster, Houghton, Morse	8	9	9	26	377	339	285	1001
Wellington, Fletcher, Thorndike, Putnam, Kelley, Roberts	16	14	13	43	511	420	347	1278
Harvard and Agassiz	5	5	5	15	198	168	155	521
Haggerty and Russell	3	3	3	9	130	88	88	306
Ellis and Peabody	5	5	5	15	195	190	169	554

In conclusion I wish to thank the School Committee, my assistants and teachers for their co-operation.

The reports of the Head Masters of the High Schools and the heads of the different departments follow and are made a part of this report.

Respectfully submitted,

M. E. FITZGERALD,

Superintendent of Schools

PRIMARY SCHOOLS

To the Superintendent of Schools:

Although the work in the upper grades has gone on without interruption for the first time in several years, the primary grades have suffered most severely from illness. The first grade children especially have been afflicted in the most serious manner. This has handicapped both teachers and pupils in accomplishing the work of the first year. Whooping-cough, for instance, which attacks many small children, necessitates absence from school, of from six to eight weeks; and children, especially those of foreign parentage, find it impossible to complete the work of the first grade in the allotted time. We have, for this reason, found it necessary to modify the rule controlling promotion from the first to the second grade.

The conditions in most of our primary grades are good. The Tarbell School has one room which is overcrowded, as it has to accommodate two teachers and a large number of pupils. The same condition exists in two rooms at the Russell School. We hope that in the near future some plan may be devised whereby these conditions may be rectified.

Reading

Reading has been, as it always should be, the foremost subject in the primary grades; therefore all primary teachers are most interested in any new method which presents itself as an aid in obtaining better results in this most interesting and delightful study.

The Beacon Method has been adopted for use in the primary schools of the city and has already met with most gratifying results in many of our primary grades. The vocabulary is simple, and comes easily within the understanding of any class of children.

We look forward to introducing this method to many more of our schools next September.

Reproduction and dramatization have been most helpful in obtaining good, intelligent reading, and the teachers have worked most conscientiously to gain good expression and clear enunciation.

We have been favored in having added to our list many new attractive books, and hope to have more, as young children should have an abundance of easy, interesting reading.

Phonics

The Beacon Method of teaching phonics is the simplest we have yet adopted. The teachers, even those who were not anxious to try this new method, are most enthusiastic and are obtaining surprising results. Many of our first grade children through the untiring work of their teachers are able to take a new primer and discover all unknown words independently.

We have learned from experience that a phonic method is the only method by which to teach reading. Children taught in this way are independent and have the power and the pleasure of discovering new words for themselves.

The Beacon does not interfere in any way with the use of the "See and Say" but may be used in connection with these books which the teachers have found so helpful and inspiring.

Writing

We have been paying special attention this year to writing and can already see a very great improvement. Most of the writing in the primary grades is supervised. Sufficient practice is given at the blackboard to start right letter formation; and at the desk, to secure proper pencil-holding and hygienic position of the body.

Papers which show marked improvement are placed on exhibition in the school. This serves as an incentive for better work.

Language

By the use of language games and other means suggested by our prescribed course in English the primary teachers are getting better results both in written and oral language.

I wish to thank our superintendent and the primary teachers for their assistance in carrying out any suggestion. Without this hearty, loyal co-operation, the success of our primary schools could never have been attained.

Respectfully submitted,

KATHARINE L. McELROY,

Supervisor of Primary Schools.

KINDERGARTENS

To the Superintendent of Schools:

The work of the kindergartens, like all Elementary Education, has been influenced by the "Project Method" on which so much emphasis has recently been placed. Everywhere it has had a tendency to encourage the child's initiative and to make the work less formal.

The "Project Method" is still in the experimental stage. My observations at Columbia University, and in Worcester, and in other cities are that in the hands of an able and experienced teacher the results may be satisfactory, but in its present stage it must inevitably be a floundering process when undertaken by the less able and inexperienced. Without wise guidance and stimulation some children will merely repeat what pleases them without progressing, some children do only what is easy, and some become capricious and even lawless. The teacher must keep the balance—she will emphasize the best work in the group, be ready to give the helpful suggestion that means progress, and stimulate lagging interest by bringing in new aims, and new material.

In Cambridge the Head Kindergartners have visited kindergartens in Boston and other cities, chosen to test the method, and the results of these visits have been reported and discussed in the general meetings. At least two of the kindergartners will study "Project Method" at Hyannis this summer.

The Director has held an afternoon class of all the Kindergartners for the study of Psychology. The text-book used is "The Mind and Its Education" by George H. Betts. The Assistants have also had a class for Programme study. For collateral reading among others the following have been used:

Motivation of School Work.....*Henry B. Wilson and Guy M. Wilson*
Scientific Suggestions for Modern Education.....*Watson*
Montessori System Examined.....*Kilpatrick*
Project Method.....*Kilpatrick*
Teachers' College Record.....*Columbia University*
Kindergarten and First Grade
The Kindergarten.....*Susan Blow and Patty Hill*
Project Teaching in Primary Grades.....*Alice Crackoweizer*
How to Show Pictures to Children.....*Estelle M. Hurle*
The Use of Kindergarden Gifts.....*Grace Fulmer*

Believing that a teacher should read at least twelve books every year or two, the Bureau of Education at Washington has issued a Reading Course for Kindergartners. Out of this list of thirty-five books the Kindergartner may choose fifteen and a Kindergartner's Teaching Reading Course Certificate signed by the Commissioner of Education will be awarded to those who read and make a report of the list selected. Each Kindergartner has been supplied with this Reading List, and our Librarian, Mr. T. H. Cummings, has made the books easily accessible to all the teachers. Each kindergarten has been supplied with the new curriculum issued by this bureau at Washington and with an excellent list of stories, chosen for their literary merit by the Literary Committee of the International Kindergarten Union for use in the kindergarten, first and second grades. The Story Telling at the Public Library by the Kindergartners has continued during the year with much success.

Home visiting in every district of the city is an essential part of the Kindergartners' work, and the results cannot be measured. It gives the Kindergartner an opportunity to know the parents, the family conditions, and to be a help in a sympathetic understanding way in many problems; it creates a helpful interest on the part of the parent in the school activities which often continues throughout his school life.

This bond between the home and the school is further emphasized by the Mothers' Meetings held in the various kindergartens all over the city. Such meetings do much to strengthen the friendly relations between teacher and parent and give an unrivalled opportunity to bring before the mothers helpful information. The nature of these meetings is determined largely by the district in which the kindergarten is situated, and the subjects are necessarily varied:

Talks on Food Values and Proper Clothing for the Child
Baby Clinics
An Afternoon for Mothers in Games and Folk Dances
An Exhibition of the Children's Work
The Aim of the Kindergarten
Co-operation between Home and School
Talks by the School Nurse
A Morning in the Kindergarten for the Mothers
Problems in Dealing with Different Types of Children
Poems read from Robert Louis Stevenson and James Whitcomb Riley

These are some of the activities carried out during the year.

In both the home visiting and in the Mothers' Meetings the Kindergartner has always met the problems of Americanization. They have given her an unusual opportunity for bringing the foreign family into an understanding and appreciation of the ideals and customs of their new country. A class in Americanization has been formed at the Thorndike Kindergarten where mothers have come to learn English. One of the Kindergartners has taught an advanced class at the Hood Rubber Company for men. This class has met three afternoons a week to study reading, writing and arithmetic, in preparation for their second naturalization papers.

During the epidemic the Kindergartners gave generously of their time and strength in caring for the sick and helped in many ways to carry on the excellent work that was done at the Merrill Hospital.

Respectfully submitted,

ALICE V. McINTIRE,

Supervisor of Kindergartens.

THE CAMBRIDGE HIGH AND LATIN SCHOOL

To the Superintendent of Schools:

In submitting a report of the Cambridge High and Latin School for the past year, I must mention first of all certain great improvements that have been made in material equipment. These are a fire alarm system entirely separate from the program bells, a building telephone, and a master clock in the central office which controls the program bells of the entire school. The completion of the annex has done away with the crowded condition that so hampered the work of the school in recent years. It has also made possible the introduction of central administrative offices. However, there are still much needed improvements connected with this building.

Last September 632 freshmen entered the school and were divided in courses as follows: 175 College Preparatory, 356 Commercial, 35 Clerical, 19 Normal, 47 General, and 10 Practical Arts. Over 60% of those not preparing for some higher institution chose commercial work. In general, this proportion holds good every year. For some time the commercial work has been offered in a regular four year Commercial Course and in a shorter two year Clerical Course. In the earlier development of commercial education in our secondary schools the short course was quite common. Of late that course has been almost entirely eliminated. Secondary commercial education should include many academic subjects of study. While preparing pupils for entering into commercial life, it should aim to equip them for living a life of social service. A recent report of the Committee on Business Education of the National Education Association makes this statement: "A conclusive argument for a commercial curriculum extending through the full secondary period is found in the fact that the necessary technical facility and a reasonable amount of general intelligence cannot be given earlier than the end of the twelfth school year. The committee urges that the rights of young people themselves forbid the introduction of a short course of the kind which attempts to fit them for service beyond the ability of the immature boy or girl or which suggests leaving school before economic necessity or other reasons compel withdrawal. To give the ill-prepared, immature boy or girl a highly specialized training, without a background of intelligence and life interest, and to rush these young people into business at an early age, appears to the committee like exploiting

children either to commercial greed of employers or to the selfishness and shortsighted prejudices of their families. The committee would emphasize that the short curriculum does not and cannot lead to a business position of so high a grade or so successful a commercial life as would be possible if the student had taken instead a curriculum giving a broader training." Our own experience verifies the truth of this statement. First year high school pupils are too immature and untrained to study stenography. Even if some may succeed in acquiring facility in the penmanship of the subject, the lack of training in English makes them impossible as stenographers. In other words, the short course which attempts to give more or less complete training is not only attempting the impossible, but is misleading the pupils who choose it. Such a course also provides a definite stopping place at an early stage in high school work, and encourages many to leave school for that reason. Those who desire a commercial training should begin a four year course and continue as far as possible, as the first years of the Commercial Course furnish better training to the pupils who must leave early than has been furnished by the Clerical. For these reasons I have recommended that the two year Clerical Course be no longer offered.

Office Practice has been added to the Commercial Course as an elective for seniors. The present year it was chosen by 53 out of 83 such seniors. The work is given in an attractive room where conditions are excellent for undisturbed attention. It is conducted by a strong, enthusiastic teacher who has had business experience and who is a thorough believer in the value of the training offered. The first half of the year pupils were taught the use of the calculating machine, of a duplicating machine, and the making of stencils. A statement machine and a filing system have now been added to the equipment, and for the remainder of the year pupils will receive instruction in their use. Additions should be regularly made to equipment until the room is furnished with practically all the mechanical devices to be found in the well equipped business office. The value of the work is much greater than that in the mere technical knowledge acquired. Pupils work on concrete material which is very real to them. They work in small groups receiving much individual attention from the instructor who acquaints them with the actual demands of the business office. They feel that the skill they acquire is giving them a distinct asset bound to be of great value when competing for a position. Some pupils will discover the particular type of work they are best

fitted to perform and such discovery will save time and disappointment later on.

For years classes in sewing have been conducted under conditions most discouraging because of the lack of proper room. The present year sees these classes using a large well lighted room with a smaller room adjoining. The change, of course, has been most helpful to the work of the department. The rooms are well adapted for the work, but they are still very poorly equipped. Tables, chairs, and more machines are much needed. The walls and woodwork should be refinished, so as to make them neat and attractive. Girls are taking sewing divided in classes as follows: First year 160, Second year 29, Third year 10. Although the small number choosing the course in Practical Arts adopted by the school board did not justify carrying on that course this year, the number of pupils interested in sewing is large, and will increase as the conditions of work improve. It is almost needless to say the need of instruction in various branches of home making was never so imperative as today. The housekeeper must have knowledge if she is to manage her home successfully. She must be acquainted with relative food values; she must know the better methods of cooking; the most economical arrangement of home equipment, the most effective way of buying. She must be trained in the choosing of and caring for the household's clothes. In former years, large production and low prices discounted the effects of waste, ignorance, and incompetency. That condition no longer exists and will probably not return in great degree. To the great majority of girls there will come no opportunity of acquiring the desired knowledge except in schools. Schools should provide courses well fitted to meet the needs peculiar to girls.

A year ago last September, the interest and generosity of private citizens enabled the school to enjoy the services of a trained nurse. Last year's report gave some account of the magnitude and importance of her work. This year Miss Kenney has succeeded Miss Munroe as nurse, while Dr. Andrews has been appointed school physician. They are both vitally interested in the whole problem of school hygiene and the health of young people. Their interest and co-operation have led to an extension of the work beyond that of last year. Dr. Andrews is at the school every day for consultation. An attempt to justify the need of giving more attention to the physical welfare of young people is no longer necessary. The need is an undisputed fact and discussion now concerns methods of procedure. Surely a first step is the securing of

reliable data as to actual conditions. With that in mind Dr. Andrews and Miss Kenney have given 1,220 physical examinations. These examinations show, in 664 girls examined, 169 with abnormal hearts, 40 with abnormal lungs, and 411 under weight, while of 556 boys examined 121 had abnormal hearts, 70 abnormal lungs, and 200 were under weight. Probably much of this rather startling condition is due to their age, especially the number under weight, and need cause no great alarm. On the other hand it must impress one with the need of giving these boys and girls careful help in outgrowing these physical weaknesses before it is too late. A community cannot afford to neglect the physical welfare of its young people. If it does the future will exact a heavy penalty. It may be possible to introduce some sort of setting up exercise for the boys next year, at least for those who are most in need. The boys of Rindge and of the High and Latin School should be provided with proper gymnasium, proper instruction, proper facilities of all kinds so that they may have a fair chance for most effective living. The equipment could be used in the evening with equal or greater benefit for boys not in school. Such things cost money, but neglect will cost more, from every angle.

The school employment service is having its usual busy year. Miss Deering reports 177 calls for employment in the past 12 months. These calls were for mothers' helpers, nurse girls, workers in candy and other factories, and in offices. Girls were sent to nearly all of these places, not always the right girls, but in most cases the work became permanent. Of the 100 applying for positions, the great majority have been placed. In addition over 50 students have been placed in part time work, largely of a commercial nature. Many of the graduating class secure their positions through the school.

It had been our hope to secure a central library room in the new building. As the hope was not realized other plans have been made, and at present there is being equipped a classical reference room and library. The school is especially fortunate in having an annual income from the Hopkins Fund which makes it possible to care for the needs of the classical department. The Hopkins trustees have given permission to purchase library bookcases and certain other necessary library equipment. The bookcases have been installed and all books bearing on classical subjects have been collected in this room. The collection is already an important one, such as very few schools possess. The room will be used not only as a reference room but as a sort of home room for the department. There a teacher may take

a class to see the books, look at the numerous pictures and examine the various exhibits. We are confident that this will mean much to the classical department of the school and will add much to the interest of its pupils, thereby improving the scholarship of many through arousing greater interest. Other books will be assembled in the regular library of the Latin Building.

Last year's report explained the system of co-operation between the Public Library and the School. That work is still conducted under the efficient instruction of Miss Hawkes of the library with the hearty co-operation of Mr. Cummings, the librarian. The experience of another year only adds to our conviction of the great value of such co-operation.

You have received from Mr. Thomas L. Bramhall, principal of the Summer High School, a report of last summer. We are continuing our policy of informing the parents of the value of the school and shall encourage all who are conditioned in work to attend that school next summer. Mr. Bramhall's report has shown you how encouraging the results are and how well justified is the expense involved. The great increase in numbers is good proof that the school is meeting a real need.

Respectfully submitted,

L. L. CLEVELAND,

Head Master, High and Latin School.

THE RINDGE TECHNICAL SCHOOL

To the Superintendent of Schools:

I herewith submit the annual report of the Rindge Technical School.

For the first time since 1914 the current school year has been conducted under normal conditions and there has been a gratifying improvement in the quality and thoroughness of the work done in nearly all departments of the school. To this result the department heads have contributed in no small degree, and their efforts are hereby gratefully acknowledged.

During the year, too, we have felt to the full the beneficial effects of the new machinery and equipment purchased from the special appropriation made last year. The expenditure of this appropriation has produced the results anticipated.

In each of the departments for which new equipment was purchased there has been a noticeable improvement not only in the quality and amount of the work produced but in the interest shown in the work. There is a certain pride in working in a well appointed shop which can hardly be described but is very apparent to those who have the opportunity to observe from day to day. There is, also, an added loyalty which comes from the knowledge that there is no school which is better equipped or maintained. The Rindge School has all the possibilities of a great technical school to render a broad service to many men and boys. It is well to have this keen pride in the school and its belongings.

The effect on the evening classes has also been marked. During the past year, although badly handicapped by the coal shortage and the abnormal conditions of employment in industry, the attendance was the largest in the history of the school, and the men who attended were of a distinctly desirable class. In the machine shop it was possible to form a class in advanced machine work, or tool-making, composed of machinists who worked with the new machines in small groups, passing from one machine to another as each was mastered.

Another interesting feature has been the work of the automobile department. The importance of the automobile in modern life has made it necessary that every boy know something of its construction and care. The boys have indicated their realization of

this fact by the great interest which they have shown. In fact, so many boys want to take automobile work that it has become one of our greatest problems to find room for them. We began the year by securing two instructors, one of whom has had long experience in building and repairing, and the other is an experienced lecturer on the automobile. The classes have devoted half of their allotted time to the shop and the other half to lectures. A considerable quantity of demonstration material has been accumulated in the shop and some fine charts and other illustrative material for the lecture room. While the work of the year has been largely experimental, some little progress has been made in the establishment of a permanent course of study. To meet the needs of the coming year, however, it is apparent that more shop room must be provided. This fact emphasizes again the subject of enlarged quarters in general which was discussed in the last annual report. It is becoming more and more difficult to carry on the school in the present quarters. In the case of the automobile department it has become impossible.

Another department also should have some earnest study in the near future, namely, the business department. Industry is recognizing more and more the fact that there is a science of production, a knowledge of which is essential to successful modern management. The essentials of this science of production are cost accounting, shop organization and management, care of tools and materials, and an acquaintance with the general principles of economics, especially as they relate to labor and capital. The elements of all these subjects may be taught to boys of high school age, and a school like ours offers a fascinating opportunity to give practical experience in some of these lines. The elements for the building up of a unique and valuable service, in keeping with the tradition of the school, are at hand. It is to be hoped that the coming year will see some progress toward the organization of this work.

The printing department, a comparatively recent addition to our shops, deserves some mention here. The fine equipment and the patient, loyal service of the instructors have made the work of this department felt in every part of the school. It is astonishing how much the general instruction is aided by the opportunity to get material printed—lecture notes, examination questions, book lists, special lessons, and the like. Moreover, the department has

solved the problem of giving instruction on the linotype machine which has baffled various other schools in this vicinity. So far as we know, ours is the only department in the vicinity of Boston where this kind of instruction is successfully given. In addition to the instruction which the department must carry on, they have produced a large amount of printing of a high order of excellence. An excellent example of this is the Courses of Study of the High Schools of Cambridge which have been distributed among the grammar schools by the Director of Vocational Guidance.

Visitors to the school very often give expression to the thought that our school must have a many-sided appeal to the average boy, who is attracted by variety and opportunity for activity. This is doubtless true, and yet there are some lines of work which we have never been able to offer which would add greatly to the effectiveness of our work. It is impossible, however, to think of anything new until the matter of proper housing for our present activities is settled.

The reiteration of our needs should not, however, serve to obscure the fact that we are exceedingly grateful for the substantial improvements which have been brought about in our working conditions during the past two or three years. We are deeply sensible of these things and appreciative of them, but still look forward to further improvement.

Respectfully yours,

JOHN W. WOOD,

Head Master, Rindge Technical School.

THE CAMBRIDGE HIGH SCHOOL LUNCH ROOMS

The following report of the Cambridge High School Lunch Rooms is submitted by the Dietitian, Miss Bessie L. Forbes:

That the work of providing food for the children in the public schools is educational is being realized more and more; and when the children are given an opportunity to obtain the right kind of food, prepared under proper conditions, a step is being taken in the direction of health. The school lunch is a means toward this end, and it has been extremely gratifying during the past year to see the steady increase in health habits. During the war, our assistant city food leader, Mrs. McCrillis, emphasized in all her work with the school children the great value of milk as food, and by her fairy story, which was told and presented in drama form, endeavored to cultivate a taste for milk. The results of this work were seen immediately in the high schools where the sale of milk increased greatly and has continued throughout the year.

There is great need of improvement in the appearance of the Latin building lunch room, as the space allowed is neither adequate nor sanitary. One of the most important points to be emphasized in a lunch room is, of course, the need of absolute cleanliness. With the floor in its present condition, this is an utter impossibility. The ideal of the lunch rooms is to have the rooms attractive and the food daintily served.

Experiments with under-nourished children are being undertaken by the school nurse and dietitian, and an interesting group of girls have volunteered for the study of their personal problems of underweight, and to try to acquire habits of health under trained guidance.

For illustration of the variety and cost of food served at the High School Lunch Counters the following menus are presented:

MONDAY		TUESDAY	
Corn Soup	5	Split Pea Soup	5
Creamed Asparagus on Toast	6	Scalloped Finnan Haddie	6
Cheese and Olive Sandwich	5	Chicken and Celery Sandwich	5
Buttered Roll	3	Bran Muffin	3
Orange Cake	3	Fruit Jelly	6
Ice Cream	10	Chocolate Cake	5
Cocoa	5	Ice Cream	10
Milk	5	Cocoa	5
Sweet Chocolate	7	Milk	5
		Sweet Chocolate	7

WEDNESDAY

Lamb Broth and Vegetables	5
Ham Sandwich	5
Graham Bread Sandwich	3
Cup Custard	6
Walnut Cake	5
Ice Cream	10
Cocoa	5
Milk	5

THURSDAY

Asparagus Soup	5
Egg Salad	10
Peanut Butter Sandwich	5
Buttered Roll	3
Newton Tapioca Pudding	6
Fruit Cake	5
Ice Cream	10
Cocoa	5
Milk	5
Salted Peanuts	6

FRIDAY

Fish Chowder	5
Salmon Salad Roll	10
Bread and Butter Sandwich	3
Caramel Pudding	6
Sponge Cake	5
Ice Cream	10
Cocoa	5
Milk	5
Sweet Chocolate	7

BESSIE L. FORBES,

Dietitian.

DEPARTMENT OF PHYSICAL EDUCATION

To the Superintendent of Schools:

There is a big work to be accomplished here in Cambridge in the field of Physical Education. It is this realization and my complete interest in the work that holds me here; although frankly I must admit that it is very discouraging at times to think what is being done in comparison to what we might be able to do. However, I hope that we have made noticeable progress during our second year of work. Even though many of the new ideas we have attempted this year are still in the experimental stage, they are working out satisfactorily.

I believe that the greatest advancement in our department has been made in the High School. I appreciate the co-operation of the three physical instructors in carrying out the ideas we have desired to adopt. The lessons have been outlined in order that progression could be followed from the last year of grammar school. The work with dumb bells, wands and Indian-clubs, also the dancing, has been new. A demonstration of in-door class work was given on the evening of April 23rd before about four hundred parents and friends.

An endeavor has been made to interest all girls in the physical department in different forms of athletics and games in the afternoons. The basketball has been a great success under the direction of Miss Grant, my assistant, with the help of three Sargent Seniors. We have allowed all the girls who have shown physical fitness from their anthropometric charts, after the physical examination has been taken, to play basketball in the class tournament instead of limiting the players—thus we have several teams and a great many girls enjoying the games.

Since May vacation the classes are conducted out-of-doors in preparation for an out-door meet on "Athletic Day" which is scheduled for June 11th, when all classes will compete for out-door athletics. In addition to the regular class work out-of-doors, we are offering baseball practice for girls, with in-door baseball on three afternoons a week in order that the girls may have a class baseball tournament. A hiking club has also been formed.

One of the most interesting features for the high school girls is the institution of a Point System which allows a girl to gain points in three ways—namely—(1) Health; (2) Recreation; (3) Class Work. Awards, such as numerals and monograms, are given for definite

number of points; and class banners, etc., denote the largest class percentage of numerals and monograms. This system has created much enthusiasm among the girls and is proving invaluable to many of them. The following rules show their classification:

I—Health

(1) Posture
(2) Faithful work at postural clinic
(3) Neatness of dress and sensible shoes
(4) Morning cold baths and two warm baths before retiring per week
(5) Brushing the teeth every morning after breakfast and before retiring
(6) Sleeping out-of-doors or with windows wide open
(7) Abstinence from tea, coffee, candy; and in bed by 9.30 on school nights

II—Recreation

(1) Practice for competitive class games and athletics
(2) Perfect attendance for one form of recreation
(3) Additional points will be given for outside recreation, such as swimming, skating, walking and tennis

III—Class Work

(1) Perfect attendance
(2) Promptness
(3) Costume
(4) Execution
(5) Earnestness

The exercises and dances for the grammar and primary grades are also new—one hundred Sargent instructors from the Senior class have taught the work, as outlined, three days each week, according to schedule.

At this time I wish to thank most heartily the teachers who have observed the work carefully, and have been responsible for the scholars practicing their exercises on the other two days. The splendid response in the rooms where such co-operation has voluntarily taken place has been very obvious. In several schools wonderful progress has been gained, due to the interest of the teachers. I feel certain that others would follow with their support if they could see the difference in the health and posture of the children. When the teaching of Physical Education is compelled or forced, the best work is not accomplished. A willing and happy spirit is the first requisite for good results.

The children of the primary grades have received their instruction in the afternoons in order to avail themselves of the kindergarten rooms, which allow the use of pianos, more freedom, and a change of

environment. The imitatory exercises for the little children have been outlined for the purpose of rhythmic development through the interpretation of stories and poetry, with an endeavor to aid the little newcomers to our shore to learn American customs through their natural rhythmical instincts. Gymnastic positions have been indirectly given in these plays to prepare the children for formal work. Formal gymnastics are started in the third grade.

In the grammar grades we have lengthened the time for gymnastics from a ten minute to a twenty minute period. The improvement over last year has been more than doubled. However, this is not long enough to accomplish all we desire. All the schools, with the exception of those where there are no accommodations for the work, have received recreative and folk dancing at least once a week. It is a handicap to have some of the best halls in the city using part of the space for small classes and preventing valuable work with a large number of children.

The boy captains have done fine work and have been of great help to me. The awarding of pins to the captains has made the importance of the position felt strongly among the boys. The girls will be given as much attention in this line another year and will have a different pin to denote their position.

All but two schools responded to the request which was made to observe Open Day in Physical Education, either on April 22nd or 23rd, when the completion of the winter's work was shown. Several schools had a great many parents and friends present—others very few. The scholars look forward to such events and they stimulate them to do their best work. In some places an excellent program was given.

After these programs the classes are conducted out-of-doors when the weather permits. The Sargent Seniors completed their teaching May 13th. Since then outlines have been sent to all the schools for out-door exercises and special work in posture.

Practically every afternoon since Thanksgiving recess, we have offered recreative work to either the boys or girls. Aside from giving the boy captains special training, we have allowed them to bring other boys to play basketball—several interschool games were tried and created much delight. As soon as the weather permitted we arranged for all the boys to play baseball on the playgrounds in the afternoons. Permits were issued and the schools were assigned different times for practice. An Athletic League was formed for the boys in each school

from the fourth through the eighth grades with officers—president, vice-president, secretary and treasurer. Class teams were chosen first, later school teams. The schools have been arranged in three sections and each section is playing a series of games to determine the winners. The winners of the three sections will compete for the championship.

A class for the teachers was opened the first week in December and continued Tuesday evenings until May 11th. The number was small but those partaking entered into the work whole-heartedly and seemed greatly benefited. I hope that many more teachers will join another year.

I feel that great progress is beginning to be evident with the correction of posture. We have offered the privilege of postural work to all the high school girls, and to as many of the grammar school girls as we can accommodate at the afternoon clinic. This has been under the direction of Miss Riddell, instructor of Corrective Gymnastics, Sargent School, with the help of the Seniors who are specializing in Mechano-Theraphy. At the suggestion of the Anti-Tuberculosis League, which is maintaining a Health Center in the Thorndike School, I have been holding postural classes since May 1st. We have offered this opportunity to all the Putnam and Thorndike School children on Monday and Thursday afternoons—thus far about seventy-five children have attended the class. Another year I hope to give all the East Cambridge school children this privilege, because the results already shown have been very apparent and most gratifying.

Here I wish to mention that it is the incompleteness of our system that makes the work discouraging. Physical training should be made compulsory for at least three years in the High School for both girls and boys. One can work to raise health standards and physical fitness, but is it ideal when one knows that fifty per cent. of the High School girls are not receiving the instruction because they have not elected Physical Education? They are the ones who usually need it the most. Do not the High School boys need this work as much as the girls? What a pity not to have proper facilities for both High School girls and boys and a man physical instructor for the latter! We cannot obtain proper results for the girls without lockers, showers and longer periods.

We have still many ideas to present another year. The need here in Cambridge is tremendous—how many of our primary and grammar school buildings allow real exercise? We have been holding classes in afternoon recreation at the Latin High and Thorndike

schools. There has been very little time when the former has been used by the girls during the winter months. How many play-yards are in fit condition? How many of the buildings have proper sanitary provisions? These are some of the questions which need to be answered before the health standards can be raised and the ideals toward which we are working be attained.

Respectfully submitted,

FANNY E. BICKLEY,

Supervisor of Physical Education.

DEPARTMENT OF VOCATIONAL GUIDANCE

To the Superintendent of Schools:

The progressive feature of this department during the past year has been the course on "Occupations" which has been given in every eighth grade in the city. By this means, over one thousand boys and girls have been led to realize that choosing an occupation is not to be left to "chance" or "luck," but is a serious business requiring considerable thought because one may be choosing a life-work, and success or failure throughout life may hinge on the ability to get into the right path.

It is a great mistake to allow pupils to go out of our schools without having had the impelling force of the life-career motive as an aid to their work while in school and as an aid to their choice of opportunities after leaving school. It puts ambition into their work and relegates "chance" and "luck" where they belong. "The world stands aside for the man who knows where he is going."

The products of our schools must know the guide-posts which plainly mark the way, and they must have the intelligence and information which will help them to decide which route they wish to take. Our purpose is to supply knowledge and information which will help parents, teachers and children to make a better connection between the work of the school and the work of the world.

Through a circular letter sent to the parents of every eighth grade pupil, we solicited their help in sizing up the aptitudes of their children and in giving us the benefit of their knowledge of their inclinations that we might strengthen these inclinations through a proper selection of the high school course.

This appeal has met with a ready response, if we may judge of the large number of parents who have shown their appreciation of the problem by seeking conferences with principals, teachers and the Director of Vocational Guidance.

By obtaining through a Vocational Record Card a list of two occupations in which the pupil is most interested, we are able to place before them much information on the selected occupations, so that their final choice may be made after due consideration of a few fundamental points.

Not the least part of this knowledge of occupations is that

what for one child may be a reason for selecting the occupation, for another may prove a deterrent, and the same information may act as a stabilizing and liberal influence in later years.

The occupation which a pupil rejects on account of its difficulties will never appeal to him as the "soft job" with the "easy money" which some more favored individual is holding down. The very fact that he made a study of it and discarded it for reasons which appeared adequate will always cause him to have a more appreciative outlook on that particular job and on the man who holds it.

It is far from improbable to assume that some of our industrial problems might meet with a readier solution if each knew more about what the other is doing. It need not be taught as a separate subject. Its obvious connection with all the activities of the world is easily transferable to all the activities of school life.

Another good reason for getting familiar with the opportunities in the world while still in school is that it gives a chance to select a purposeful course in the high school and many times it shows pupils the need of continuing their education.

The placement and follow-up work have made steady strides, but the difficulty here has been that the pupils have so long been in the habit of placing themselves that the work of the Vocational Guidance Director is frequently rendered more or less futile by being confronted with a pupil who has a "promise of employment" in his hand. It will take time and the help of teachers and principals to overcome the handicap. The course in "Occupations" and the opening of the Continuation School in September may help to solve the problem.

In closing I wish to thank the principals and teachers who showed their cordial approval in so many different ways.

Respectfully submitted,

MAUDE A. DEEHAN,

Director.

SPECIAL CLASSES

A great gain has been made in the organization of these classes this past year. Before a child is placed in a Special Class he is examined by the school doctor and nurse. If the doctor decides that the child should have individual attention and special work, a mental test is given.

We are much indebted to Professor Walter F. Dearborn of Harvard University for his splendid work with us this past year; his generosity and expert advice have enabled us to make the best disposition of these children. After the mental test is given by Professor Dearborn he makes a report on each case, a copy of which report is sent to the principal of the school. The mental test supplements the judgment of the teachers and principals and aids the supervisor in the proper grading and classification of pupils.

The teachers of our Special Classes have been courteously invited, and with the permission of the superintendent have attended weekly conferences in Boston where Special Class problems are brought and discussed. Groups have been organized in reading, language, number, spelling and constructive work as related to the every-day needs of these children. These conferences have proved most helpful and much credit is due these teachers for their untiring patience and devotion to their work.

I recommend that classes for backward children be established in other schools; that more classes for prevocational work be formed; and that there be further provision for the following up of children after they leave the Special Classes.

Report on Class for Conservation of Eye Sight—Roberts School

The class for Conservation of Eyesight opened in September with fourteen pupils, representing grades from the first through the seventh. This year the State appropriated five hundred dollars to help support the class. The room has been thoroughly renovated. Adjustable desks have been furnished, which can be moved so as to give the child the best possible light. Two sets of clear-typed books have been added; they include readers, geography, and history. A Beacon Chart and large outline maps have been supplied.

Through the kindness and painstaking work of Mr. Wood of the Rindge Technical School, we expect to have a large type grammar and speller in the hands of the pupils. The location of the room, the restful coloring, the adjustable desks, and the large type material have been a great help to the children and teacher.

Much of the work in this class is necessarily pioneer and praise is due Miss Horgan for her professional spirit and her personal interest in the children.

Respectfully submitted,

ALICE V. McINTIRE,

Supervisor of Special Classes.

VACATION SCHOOLS

At a meeting of the School Committee held May 17, 1919, it was voted that a Summer Open Air School be held at the Haggerty School Building. In accordance with this vote, the Open Air Vacation School was opened on July 7th, and continued for seven weeks, closing August 20th, 1919. An account of this school will be found below.

A vacation school was also opened in the English High building for the benefit of the pupils of the freshman and sophomore classes who failed of promotion. The school opened on Monday, July 7th, and continued for five weeks. Three hundred thirty-eight pupils were registered under the charge of eight teachers. The average attendance for the five weeks was two hundred ninety-six.

OPEN AIR VACATION SCHOOL

To the Superintendent of Schools:

The third season of the Open Air Vacation School extended from Monday, July 7, 1919, to Wednesday, August 20, 1919, inclusive. As in past years the work of the school was made possible by the co-operation of the School Department, the Board of Health, and the Anti-Tuberculosis Association. Nearly two hundred physically handicapped children were admitted to the classes which, as usual, were held at the Haggerty School in the Fresh Pond District.

During the first week the pupils were weighed, measured, and given a physical examination. The following defects were discovered in one or more cases: adenoids; anemia; asthma; bronchitis; chorea (old cases); dental caries; ear and eye troubles of varying types; heart trouble, organic and functional; infantile paralysis (old cases); kidney trouble; malnutrition; pediculosis; rickets; ringworm; scabies; spinal curvature; tubercular hip; enlarged or diseased tonsils, and ptosis. Several of the children were suffering from two or more of these defects. More than eighty-six per cent. were from five to twenty-five pounds under weight, and nearly one hundred per cent of those examined needed special training in posture.

Under the direction of the nurses and teachers there was

carried on a program of supervised play, physical exercise, instruction in personal hygiene and first aid, designed to correct individual weaknesses and promote the physical well-being of the pupils. This, with the tonic of regular shower baths and a generous allowance of milk and other nourishing food, produced a notable improvement in their condition. Despite the shortness of the term, excessive heat, heavy rain storms, and interruptions caused by the car strike, malnutrition was so successfully treated that practically every child was brought up to normal weight; the greatest gain in the girls' department was fourteen pounds fifteen ounces, and in the boys' section, thirteen pounds thirteen ounces. A gratifying improvement in posture was one of the most satisfactory results of the summer's work.

Under the supervision of the school nurses, one hundred thirty-four visits were made to dental clinics during the term. All of the children cared for in this way had their dental work completed before the opening of the regular school session. Twenty-four had nose or throat care; two were given special skin treatment at one of the local hospitals; four had orthopedic work done at a Boston hospital; and three were given X-Ray examinations for puzzling deformities. Other children were placed by their parents under the care of the family physician when the results of the examination were communicated to them. Those who needed further treatment when the summer school came to an end were followed up through the regular schools during the fall term.

From the beginning the school was popular with the parents, and, for the third year, the children have had a happy, healthful, and profitable summer. The program below will give to those interested a fair idea of the activities of a typical day at the school.

DAY'S PROGRAM

9.00	Children meet group teacher at starting point for transportation to the school.
9.30	Opening of school; roll call.
9.40	Assembly exercises; setting-up drill; corrective gymnastics.
10.00	Milk.
10.05	Supervised play, walks, etc., in park.
11.30	Rest period, in grove or hall.
12.10	Wash-up period.
12.20	Dinner.
1.20	Tooth brush drill.

*1.40 Story hour, in park.
*2.00 Games, walks, etc., in park.
2.30 Shower baths, at school.
3.00 Grouping for transportation.
3.15 Milk.
3.30 Dismissal. (Children accompanied on trip by the group teacher.)

STATISTICS

Number enrolled	268
Average number belonging	189
Average number attending	167
Per cent. of attendance	88
Length of session	6 weeks
Length of day	6 hours

55 pupils had perfect attendance.
123 certificates were issued for regular attendance and excellent deportment.
(The school opened at 9.30 A. M. and closed at 3.30 P. M.)

Respectfully submitted,

GERTRUDE B. DUFFY,

Principal.

* Children desiring to devote these periods to academic work were provided with facilities for doing so out-of-doors, but all real book work was voluntary.

EVENING SCHOOLS

To the Superintendent of Schools:

The Evening School term for 1919–1920 opened on the first Monday in October. Six elementary schools, the Evening High School, the Rindge Evening Industrial School, and the Evening Trade School for Women enrolled more than 1500 students during the first two weeks. The publicity campaign resulted in a marked increase in the Rindge School. Circulars in different languages were distributed among the foreign-born in East Cambridge and helped to increase the attendance at the Kelley and Putnam Schools.

The nature of Evening School work requires careful organization, strict definition of lesson content, considerable attention to the students' individual capacities and interests, and a plan of constructive supervision of the teaching processes. During the past term several conferences were held with principals and teachers at which these points were discussed. Special emphasis was placed on the problem of decreasing the number of students who drop out of school before the term's work is completed. It is generally understood that many students are compelled to leave school on account of conditions over which they have no control. A study of reports from different school systems in this state showed that the loss varies from 40% to 75%. Careful preparation of lesson material and live purposeful teaching in a number of classes have proven to be the best means of keeping the loss at the lowest possible figure.

Rindge Evening Industrial School

The new equipment in the machine shops and automobile departments proved to be attractive and the enrollment was nearly double that of former years. The drawing departments, the electrical courses, and the forge shop were well attended. This school is now serving a clientele of men and women who have special interests in various lines of mechanical work. We may expect a larger enrollment next year and the committee may be asked to open the shop classes on five nights a week. A large number of men were compelled to place their names on a waiting list this year.

A teacher training course was conducted at the school under the direction of the Vocational Department of the State Board of Education.

Evening High School

This school has always attracted several hundred young men and women interested in securing commercial training. The work of this term was undertaken and continued with an enthusiasm and efficiency which reflects very creditably on the principal and teachers. The opportunities for correlating courses with day high school work are such as require that the teaching force be selected as far as possible from the day school corps. The special problems in Evening High School can be solved only by principal and teachers who have had experience in such work. It is extremely desirable that the teaching staff be on as permanent a basis as conditions warrant. The selection, appointment, and re-appointment of these teachers should be made before the close of the day school term. Under such a plan it will be possible to prepare and revise in conferences the unit courses which must be organized before the opening of the term in October. Two experienced teachers should be selected as heads of the departments of English and Commercial Branches.

Evening Trade School for Women

The enrollment in this school showed a favorable increase and proved that the women of our city wish to receive a specialized training in sewing, millinery, cooking, and home nursing. The exhibit at the graduation was very highly commended.

A teacher training course for work in the Household Arts classes was conducted during the term by an agent of the State Board of Education.

Evening Elementary Schools

The classes in grammar grade work were well attended in each of the six schools and the number of graduates increased in three districts.

Americanization Classes

Sixteen classes for foreigners were conducted during this term. The number of adult foreigners showed that many immigrants in our city are willing to attend evening school when they feel that they are receiving the kind of training which they need in learning to talk, speak, and write English.

Seven naturalization classes prepared twenty-six men to pass their naturalization examinations and forty-two men were helped in taking out their first papers.

Nine Americanization meetings were conducted during the winter months with more than three thousand foreigners in attendance. Patriotic addresses, motion pictures, vocal and instrumental concerts, and social programs proved to be of real interest to the foreign-born, and provided the opportunities for friendly intercourse between native and foreign-born.

SUMMARY

The generous salary increase voted by the committee in January will attract many experienced teachers in the several departments of Evening School work. The young men and women who are ambitious to secure further education deserve the best teaching.

The coal shortage necessitated the closing of the schools during January, February and March. The long lapse was responsible for a large decrease in the attendance during April.

I wish to acknowledge my indebtedness to the principals and teachers who have co-operated splendidly in maintaining the professional standards of Evening Schools in Cambridge.

The following table shows the buildings used for evening school purposes, and the character of the work carried on in each:

TABLE I

Schools	Classes
Rindge School:	
a. Industrial Classes.	Woodwork, ironwork, printing, mechanical drawing, architectural drawing, electricity, estimating, gas engine and auto repair work.
b. Drawing Class.....	Freehand drawing.
High School.....	Academic, commercial.
Haggerty, Kelley, Putnam, Roberts, Shepard, Webster	English for foreigners, grammar school work, dressmaking, embroidery, civil service.
Evening Trade School for Women.....	Cooking, embroidery, sewing, millinery.

ATTENDANCE AT THE EVENING SCHOOLS

1919 - 1920

The following tables show the attendance at the different evening schools, the number of assistant teachers, the number of graduates, and the cost of the schools for the year 1919-1920:

TABLE II

Schools	Number Registered			Average Number Belonging	Average Attendance	Per Cent of Attendance
	Males	Females	Total			
Rindge Ind. Classes....	349	11	360	174	134	77
Mech. Drawing Classes	55	..	55	28	23	82
Freehand Draw. Classes	27	5	32	16	13	81
Evening High School...	242	248	490	335	241	72
Haggerty School.....	17	130	147	95	79	83
Kelley School.....	103	143	246	140	96	68
Putnam School.....	199	102	301	151	131	86
Roberts School.....	85	83	168	82	62	75
Shepard School.....	21	55	76	57	47	82
Webster School.....	61	142	203	105	77	74
Evening Trade School for Women.....	..	287	287	154	139	90
Total.....	1,206	1,159	2,365	1,337	942	70

COST OF THE EVENING SCHOOLS

1919 - 1920

TABLE III

Schools	Salaries of Teachers	Cost of Text-books and Supplies	Cost of Janitor Service	Total	Cost per Pupil
Rindge Industrial Classes.....	$2,101.21	$705.65	$233.59	$3,040.45	$22.68
Mechanical Drawing Classes...	463.00	105.90	66.74	635.64	27.63
Freehand Drawing Classes.....	211.50	44.75	33.37	289.62	22.27
Evening High School.....	2,741.94	390.19	452.61	3,584.74	14.87
Haggerty School.....	923.44	31.21	121.41	1,076.06	13.62
Kelley School.....	1,262.44	1.57	139.04	1,403.05	14.61
Putnam School.....	1,325.44	16.22	156.26	1,497.92	11.43
Roberts School.....	1,025.94	...	126.34	1,152.28	18.58
Shepard School.....	642.44	...	94.00	736.44	15.66
Webster School.....	1,003.44	...	218.58	1,222.02	15.61
Girls' Trade School.....	1,113.44	152.22	121.02	1,386.68	9.97
Total.....	$12,814.23	$1,447.71	$1,762.96	$16,024.90	$17.01

NUMBER OF ASSISTANT TEACHERS

1919 - 1920

TABLE IV

Schools	Average Number of Assistant Teachers	
	1918–1919	1919–1920
Rindge Industrial Classes	9	13
Rindge Drawing Classes	2	3
Freehand Drawing Classes	1	1
Evening High School	16	15
Haggerty School	6	6
Kelley School	10	9
Putnam School	9	10
Roberts School	8	7
Shepard School	5	3
Webster School	6	7
Trade School	4	9
Total	76	83

NUMBER OF GRADUATES

1919 - 1920

TABLE V

Schools	Number of Graduates	
	1918–1919	1919–1920
Rindge Industrial Classes	10	26
Mechanical Drawing Class	1	1
Freehand Drawing Class	..	1
Evening High School	86	77
Haggerty School	11	15
Kelley School	38	21
Putnam School	51	58
Roberts School	21	25
Shepard School	15	22
Webster School	27	19
Total	260	265

ATTENDANCE AT THE STATE-AIDED CLASSES
1919–1920

TABLE VI

Schools	Number Registered			Average Number Belonging	Average Attendance	Per cent of Attendance
	Males	Females	Total			
Rindge School:						
a. Industrial Classes.	349	11	360	174	134	77
b. Drawing Classes..	82	5	87	44	36	81
Rindge School totals.	431	16	447	218	170	79
Trade School.....	...	287	287	154	139	90
Total.....	431	303	734	372	309	83

ATTENDANCE AT THE INDUSTRIAL CLASSES
(These classes were for women in the elementary schools)
1919–1920

TABLE VII

Schools	Number Registered	Average Number Belonging	Average Attendance	Per cent of Attendance
Haggerty School.....	147	95	79	83
Kelley School.....	70	52	37	71
Putnam School.....	32	9	6	71
Roberts School.....	47	15	12	79
Shepard School.....	31	21	17	80
Webster School.....	92	38	25	67
Total.....	419	230	176	76

Respectfully submitted,

CHARLES M. HERLIHY,

Assistant Superintendent of Schools.

SCHOOL CENTERS

To the Superintendent of Schools:

School Center activities were conducted at the Thorndike, Peabody, Agassiz and Lowell Schools during the past term.

The School Center as an Agency for Americanization

The nation-wide interest in Americanization has helped to focus the attention of the American public on the problems of unifying the social and civic consciousness of our cosmopolitan population. Our own city of Cambridge presents a type example of the industrial centers of the country.

In a population of approximately 110,000, there are 15,000 immigrants who have come from non-English speaking countries. Fourteen different nationalities are represented in this group.

Evening Schools, factory classes, neighborhood classes, and mothers' classes help to train these immigrants in learning our language. But educational work alone is not sufficient to make the immigrant a desirable citizen in our community. His isolation in certain districts with his fellow countrymen must be counteracted by meeting American citizens on a disinterested, friendly social basis. The School Center is admirably adapted for these meetings.

During the past season eight Americanization nights for native and foreign-born were conducted at the Thorndike School Center. The average attendance at these meetings was four hundred. Inspirational addresses were delivered by prominent officials and citizens. Vocal and instrumental concerts, motion pictures, folk dancing and social dancing helped to bring the immigrant into closer relationship with his neighbors in our city. The Americanization Committee cooperated with the School Department and special mention should be made of the real service of the Women's Committee. The marked success of these meetings justifies an extension of the work next year.

The sewing, millinery, cooking, gymnastic, and dramatic clubs for the women of East Cambridge were well attended. The gymnastic and basketball clubs proved to be most popular for the young men. The social parties for men and women on Thursday evenings helped to develop the community spirit which is the real purpose of all school center work.

The work in the Lowell, Peabody and Agassiz Centers included clubs for dramatics, dancing, cooking, sewing, millinery, French and Current Events.

A beginning in forum discussion was made at the Peabody Center. The necessary closing of the Evening Schools and Centers on account of coal shortage interrupted the program. The work will be resumed next year, however, and an extension of this valuable center activity to the other districts is very desirable.

I wish to acknowledge my indebtedness to Miss Josephine Wyman, Miss Jane Feeny, and Mr. Martin O'Connor, who co-operated splendidly in the management of the centers.

The following table shows the expenditures for Civic Centers for 1919–20:

CIVIC CENTERS

	Teachers' Salaries	Janitors' Salaries	Total
Agassiz	$158.00	$ 28.00	$ 186.00
Lowell	110.50	24.00	134.50
Peabody	250.50	36.31	286.81
Thorndike	938.00	122.80	1060.80

Respectfully submitted,

CHARLES M. HERLIHY,

Director of Evening Schools and School Centers.

DEPARTMENT OF MUSIC

To the Superintendent of Schools:

With the passing of war and its influences, Music as a study has resumed its accustomed place in the curriculum. The pupil mind has been guided gradually back into normal channels, and there have been no serious interruptions from outside. Reasonable progress with the regular course of study, therefore, has been made; and, while it may take another year to regain lost ground, the result as a whole is satisfactory.

The vacancy that existed in this department in the Spring of 1919 made it impossible to attain the highest working efficiency until the beginning of the new school year in September. To advance the work of reconstruction as rapidly as possible, I assigned Miss Ahern, the new Assistant in Music, to the Primary Schools; and Miss Wyman to the fourth, fifth and sixth grades, in addition to the special work she has been doing in Music at the Russell and the Peabody Schools.

I retained the work in the seventh and eighth grades and in all of the High School classes. This working arrangement has enabled me to visit many of the Primary rooms throughout the city for supervisory purposes, and to deal directly with any problem that may arise.

In departments like that of Music there are occasions when it is necessary to work outside of school hours. It should be said that my assistants have not only responded to all such calls, but have often volunteered to assist in the accomplishment of tasks that I am ordinarily obliged to do alone.

Elementary Grades

The new text book "Primary Melodies" is filling the mission for which it was intended in the first and second grades. It furnishes additional rote song material for the former, and its little melodies with attractive words give a wider field to second grade teachers in making sight reading attractive to pupils.

Some of the technical work has been eliminated in the third grade. Pupils are not required here to memorize pitch names of the lines and spaces of the staff, because such knowledge is not absolutely necessary to the sight reading of songs. The time thus saved is being used for Ear Training by means of interval drill, and for learning

new songs. The study of pitch names is now taken up in the fourth grade.

Individual work has been required in the Primary and the Intermediate departments as a means of securing concentration and the results have become apparent in the general class work.

In the seventh and eighth grades the Bass Clef has been the special subject and the circle of Keys is here completed. Three and four part singing is taught.

The High Schools.

At the High and Latin School during the year there has been a much livelier interest in the courses of Music offered. The present classes include a Freshman chorus, an upper class chorus to which all pupils above Freshmen are eligible, a first section orchestra for more experienced players, a second section orchestra for the training of novices in ensemble playing, a class in Harmony which has two periods each week, a Boys' Glee Club and a choir of forty mixed voices. During the year I have given short talks of a historical nature with illustrations to the choruses which have included the songs of American composers and the Folk Songs of America and other countries.

The musical clubs of the school gave a public presentation of Gilbert and Sullivan's "Mikado" in Brattle Hall, April 22 and 24th, 1920. Each performance was before an audience which taxed the capacity of the hall.

At Rindge Technical School the inter-class song contests were revived and were very interesting. Four teams competed for the John W. Wood, Jr., cup. The winning team was under the leadership of Thomas P. Leonard, a member of the Boys' Glee Club. The judges were Messrs. Earl P. Collins and Roger W. Coleman of the Alumni and Misses Mosher and Cunningham and Mr. Bochman of the Faculty. An interesting feature was the announcement of the winner of the Alma Mater Song Competition. The composition of Mr. George Bowles of the Senior Class was awarded the Senior cup.

It is hoped that the contests between High and Latin and Rindge for the First Volunteers' cup which were temporarily abandoned on account of the war may be resumed next year.

Respecfully submitted,

JOHN B. WHORISKEY,

Director of Music.

ATTENDANCE OFFICERS

The work of the attendance officers is carried on under the direct supervision of the superintendent. There are seven officers, one being assigned to the high schools, five to the different school districts, and one to the work of looking after the newsboys and also assisting for about two hours a day in issuing certificates to minors.

The attendance officers are to devote all of their time to the work of their office; to inquire into all cases of absence, juvenile vagrancy, persistent disobedience to the rules of the school, and unlawful detention from school; to report to parents all cases of suspension from school; to visit each school at least once each day unless otherwise directed by the superintendent; to prevent children from loitering about school premises to the annoyance and disturbance of the neighborhood; to prosecute in the name of the city, when so directed by the superintendent, all persons violating the public statutes relating to school attendance, and to assist in taking the school census when so directed.

They are to visit and inspect each month, while the public schools are in session, all factories, workshops, and mercantile establishments in their respective districts, and ascertain if there is any violation of the public statutes relating to the employment of children; to pay particular attention to the employment of minors who are required to attend evening school as a condition of their employment; to thoroughly acquaint themselves with all cases of neglected children coming to their knowledge in their several districts. When satisfied, after a full investigation and careful consideration, that the case is one in which court proceedings should be taken, to report to the superintendent and co-operate with him in his disposition of the case.

Attendance officers may be detailed by the supeintendent to be present at any school building during the session of an evening school, or whenever the building is used for other than day school purposes, to assist in the preservation of order and in the protection of property in and about the building.

The following is a summary of the reports of the work of the attendance officers for the year from September, 1918, to September, 1919:

Number of absences investigated	17,929
Truancy, first offence	686

Truancy, third offence	108
Children found wandering about the streets not belonging to any school	120
Such children sent to school	117
Visits to mercantile and manufacturing establishments	384
Children employed without certificates	81

It is also the duty of these attendance officers to report to the schools all cases of contagious diseases which have been reported to the school department by the Board of Health. During the calendar year from January 1, 1919, to January 1, 1920, the following number of cases have been reported:

Chicken Pox	375
Diphtheria	249
Measles	191
Mumps	266
Scarlet Fever	189
Whooping Cough	432
German Measles	22
Total	1724

The statistics of the private and parochial schools, obtained by one of the attendance officers, shows that there are seven parochial schools and five private schools in the city.

The number of pupils in the private and parochial schools on April 1, 1920, was as follows:

Parochial Schools	5,476
Private Schools	399
Total	5,875

SIGHT AND HEARING TESTS

In accordance with the laws of the state, the annual testing of the sight and hearing of the pupils was made this year as usual. All of the pupils were examined except those in the first primary grade and in the kindergartens.

The following is a summary of the tests in sight and hearing during the last four years:

	1916	1917	1918	1919
Number enrolled	15,401	15,238	15,270	15,528
Number defective in sight	1,717	1,704	1,503	1,585
Number defective in hearing	180	233	128	194
Number of parents notified	1,636	1,601	1,427	1,527

June 28, 1920.

ORDERED:

That the report of the Superintendent be accepted and adopted as the report of the School Committee for 1919.

MARIE WALSH,

Secretary.

Cambridge, Massachusetts.

STATISTICS

FINANCES

For the Financial Year from April 1 1919, to April 1, 1920.

RECEIPTS

Amount received from Tax Levy ($6.00 per $1,000 valuation)	$779,208.19
Amount received from Tax on Intangibles, collected by state	75,031.27
Amount received by special act of Legislature from January first (62½c per $1,000 valuation)	82,237.33
Unexpended balance from 1918-1919	14,111,13
Revenue received	24,641.08
Total amount available for support of schools	$975,229.00

EXPENDITURES

Salaries of teachers, all schools		$696,617.97
Administrative salaries		43,815.29
General administrative expenses		7,630.11
Text-books and supplies		54,285.13
Transportation of pupils		449.00
Care of truants		63.15
Tuition to other cities		388.40
Janitor service		71,852.11
Janitors' supplies		2,392.56
Fuel and light		33,928.87
Repairs to buildings		16,288.97
Furniture and furnishings		401.25
Other school expenses		3,315.92
Equipment at Rindge Technical School, special appropriation		7,448.52
Total expenditures		$938,877.25
Balance unexpended and carried forward to 1919-1920		$36,351.75
Outstanding bills for 1918-1919	$5,090.15	
Evening school outstanding bills	4,101.05	
Special teachers' salary appropriation carried forward	11,352.23	
		20,543.43
Net unexpended balance		$15,808.32

COST OF INSTRUCTION

From April 1, 1919, to April 1, 1920

Schools and Officers	Cost of Instruction	Average Number of Pupils for the Year Ending in June	Cost per Pupil
High and Latin School	$135,275.28	1,910	$70.82
Rindge Technical School	65,417.58	585	111.82
Grammar Schools	241,512.09	6,696	36.06
Primary Schools	157,356.19	4,531	34.72
Kindergartens	32,021.85	683	46.88
Open Air Classes	11,109.74	128	86.79
Substitute Teachers	12,517.75		
Department of Practical Art	2,788.00		
Department of Music	4,789.76		
Department of Physical Education	3,324.25		
Manual Training and Pre-Vocational Work	6,246.62		
Teachers of Sewing	6,530.25		
Teachers of Cooking	2,091.20		
Teacher of Stammerers	1,230.00		
Teacher of Vision Class	1,269.00		
Teacher at Agassiz Museum	1,991.14		
Director of School Gardens	525.00		
Director Vocational Guidance	1,635.00		
Superintendent	5,247.00		
Assistant Superintendents	2,990.78		
Supervisor of Primary Schools	1,830.00		
Supervisor of Kindergartens	1,830.00		
Director of Continuation Schools	667.00		
Business Agent	2,473.00		
Pension for Agent	1,420.00		
Superintendent of School Buildings	1,250.00		
Clerks	5,996.01		
Porter	1,128.00		
Attendance Officers	10,512.50		
Total	$722,974.99	14,533	$49.12

Cost of Instruction in the Evening Industrial School	$2,360.27
Cost of Instruction in the Evening Drawing Schools	565.00
Cost of Instruction in the Evening Elementary Schools	6,256.50
Cost of Instruction in the Evening Trade School for Girls	1,101.00
Cost of Instruction in the Evening High School	2,821.50
Total	$13,104.27
Cost of Instruction in Vacation Schools	$3,005.00
Cost of Instruction in Civic Centers	$1,349.00

COST OF INSTRUCTION IN THE DAY SCHOOLS

Salaries of teachers, superintendents, supervisors, agent, clerks, and truant officers.

Year	Number of Teachers in December	Number of Pupils in December	Average Number of Pupils for Year Ending in June	Total Cost	Cost per Pupil
1911	459	15,328	15,135	$407,730.84	$26.94
1912	473	15,502	14,946	432,370.47	28.93
1913	485	15,909	15,258	469,292.44	30.75
1914	499	16,105	15,510	501,693.10	32.34
1915	523	16,232	15,581	545,686.00	35.02
1916	530	15,750	15,799	594,460.37	37.63
1917	519	15,659	15,202	610,050.79	40.13
1918	531	15,578	14,936	653,324.23	43.74
1919	518	15,731	14,487	722,974.99	48.31

COST OF THE DAY SCHOOLS

Cost of instruction, of text-books and supplies, of incidental expenses, of the care of truants, the care of schoolhouses, and of the transportation of pupils, but not including repairs.

Year	Number of Teachers in December	Number of Pupils in December	Average Number of Pupils for Year Ending in June	Total Cost	Cost per Pupil
1911	459	15,328	15,135	$508,168.85	$33.58
1912	473	15,502	14,946	535,683.13	35.84
1913	485	15,909	15,258	566,215.45	37.11
1914	499	16,105	15,510	607,875.97	39.19
1915	523	16,232	15,581	664,001.18	42.62
1916	530	15,750	15,799	725,161.39	45.90
1917	519	15,659	15,202	739,004.77	48.61
1918	531	15,578	14,936	837,308.55	56.05
1919	518	15,731	14,487	90,980.42	62.25

COST OF INSTRUCTION IN THE EVENING SCHOOLS

Year	Drawing	Industrial	High	Elementary	Director	Total
1914	$654.00	$1,808.50	$3,152.00	†$7,820.50	.....	$13,435.00
1915	528.00	1,861.50	3,558.00	†8,336.50	.....	14,284.00
1916	678.00	1,829.50	3,502.50	8,540.00	.....	14,550.00
1917	432.00	1,936.50	3,215.00	7,917.00	.....	13,500.50
1918	*565.00	*2,716.00	2,268.50	5,910.00	$300.00	*11,759.50
1919	**674.50	**4,992.50	3,491.50	8,109.00	.....	**17,267.50

†Including the trade class, etc.
*This amount includes $589.74 received from Smith-Hughes Fund.
**This amount includes $880.19 received from Smith-Hughes Fund.

GENERAL STATISTICS

Population of Cambridge

1875	47,838	1905	97,434
1885	59,600	1910	104,391
1895	81.643	1915	108,822
1918, estimated			114,000

School Census

Number of children in the city between five and sixteen years of age: boys, 10,178; girls, 9,673	19,851
Number in the city between five and seven	3,266
Number in the city between seven and fourteen	13,961
Number in the city between fourteen and sixteen	2,624
Number in the public schools between five and sixteen	13,976
Number in the private schools between five and sixteen	5,875
Number not attending school between five and sixteen	1,938

Schools and Classrooms

December, 1919

(a) High and Latin School	1	Classrooms in use	51
(b) Rindge Technical School	1	" " "	20
(c) Elementary Schools	28	" " "	306
Kindergartens	19	" " "	19
Evening Industrial School	1	" " "	7
Evening Drawing Schools	2	" " "	2
Evening High School	1	" " "	25
Evening Elementary Schools	6	" " "	48
Evening Trade School	1	" " "	8
Whole number of Day Schools			51
Whole number of classrooms for Day Schools			401
Whole number of Evening Schools			11
Whole number of classrooms for Evening Schools			90

(a) This school occupies two buildings and has assembly halls, libraries, lecture rooms, recitation rooms, chemical and physical laboratories, a drawing room and a gymnasium.

(b) This school occupies three buildings and has an assembly hall, drawing rooms, recitation rooms, chemical, electrical and physical laboratories, and rooms for various kinds of shop work.

(c) Sixteen of these schools have assembly halls.

NUMBER OF TEACHERS IN THE DAY SCHOOLS

December	High and Latin School	Rindge Technical School	Elementary Schools	Kindergartens	Trade School	Directors and Special Teachers	Total
1915	84	28	359	30	8	14	523
1916	88	32	355	33	6	16	530
1917	88	30	346	33	6	16	519
1918	92	32	343	30	0	34	531
1919	87	35	332	31	0	33	518

ATTENDANCE AT ALL THE DAY SCHOOLS

Year	Number Registered			Average Number Belonging	Average Daily Attendance	Per cent of Attendance
	Boys	Girls	Total			
1915	8,853	8,496	17,349	15,581	14,622	93.8
1916	8,846	8,597	17,443	15,799	14,599	92.4
1917	8,521	8,331	16,852	15,202	14,111	92.8
1918	8,619	8,033	16,652	14,509	13,290	91.5
1919	8,330	8,304	16,634	14,440	13,034	90.2

ATTENDANCE AT THE HIGH AND LATIN SCHOOL

Year	Number Registered			Average Number Belonging	Average Daily Attendance	Per cent of Attendance
	Boys	Girls	Total			
1915	696	1,343	2,039	1,857	1,784	96.1
1916	785	1,604	2,389	2,166	2,033	92.9
1917	748	1,613	2,361	2,142	2,016	93.7
1918	859	1,431	2,290	2,001	1,887	94.2
1919	622	1,525	2,147	1,908	1,757	92.2

(a) This number includes 50 tha entered the school in February.

ATTENDANCE AT THE RINDGE TECHNICAL SCHOOL

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1915	621	548	514	93.8
1916	702	620	577	93.1
1917	694	608	566	93.1
1918	706	562	530	94.3
1919	697	585	544	92.9

(a) This number includes 37 that entered the school in February.

ATTENDANCE AT THE GRAMMAR SCHOOLS

Year	Number Registered			Average Number Belonging	Average Daily Attendance	Per cent of Attendance
	Boys	Girls	Total			
1915	3,987	3,800	7,787	7,160	6,866	95.9
1916	3,966	3,717	7,683	7,131	6,674	93.6
1917	3,838	3,597	7,435	6,892	6,489	94.1
1918	3,785	3,534	7,319	6,518	6,097	93.5
1919	3,620	3,592	7,212	6,711	6,145	91.5

ATTENDANCE AT THE PRIMARY SCHOOLS

Year	Number Registered			Average Number Belonging	Average Daily Attendance	Per cent of Attendance
	Boys	Girls	Total			
1914	3,121	2,888	6,009	5,367	4,911	91.5
1915	2,955	2,789	5,744	5,171	4,726	91.4
1916	2,792	2,716	5,508	4,927	4,510	91.5
1917	2,820	2,626	5,446	4,777	4,253	89.0
1918	2,933	2,745	5.678	4.558	4,049	88.8

ATTENDANCE AT THE KINDERGARTENS

Year	Number Registered			Average Number Belonging	Average Daily Attendance	Per cent of Attendance
	Boys	Girls	Total			
1915	428	465	893	649	547	84.3
1916	438	487	925	711	589	82.7
1917	449	405	854	633	530	83.7
1918	449	442	891	650	523	80.4
1919	458	442	900	678	539	79.9

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE HIGH AND LATIN SCHOOL

Year	Boys	Average Age	Girls	Average Age
1915 Sept.	225	14 years 3 months	615	14 years 7 months
1916 Sept.	229	14 years 1 months	555	14 years 5 months
1917 Sept.	236	14 years 1 month	528	14 years 2 months
1918 Sept.	189	14 years 1 month	490	14 years 3 months
1919 Sept.	216	14 years 0 month	427	14 years 3 months

NUMBER OF PUPILS GRADUATED FROM THE HIGH AND LATIN SCHOOL

Year	Boys	Average Age	Girls	Average Age
1915	64	17 years 8 months	195	17 years 9 months
1916	87	17 years 9 months	193	18 years 0 months
1917	78	18 years 0 months	167	17 years 10 months
1918	67	16 years 6 months	147	16 years 7 months
1919	65	17 years 10 months	181	17 years 9 months

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE RINDGE TECHNICAL SCHOOL, WITH THE NUMBER OF GRADUATES

Year	Admitted	Average Age	Graduated in June	Average Age
1915 Sept.	329	14 years 6 months	87	18 years 6 months
1916 Sept.	331	14 years 3 months	62	18 years 7 months
1917 Sept.	303	14 years 4 months	67	18 years 6 months
1918 Sept.	306	14 years 2 months	46	17 years 9 months
1919 Sept.	328	14 years 3 months	57	18 years 2 months

NUMBER OF PUPILS GRADUATED FROM THE GRAMMAR SCHOOLS

Year	Boys	Average Age	Girls	Average Age
1915 June	560	14 years 6 months	605	14 years 6 months
1916 June	597	14 years 4 months	613	14 years 3 months
1917 June	559	14 years 6 months	531	14 years 2 months
1918 June	400	14 years 4 months	407	14 years 4 months
1919 June	408	14 years 6 months	399	13 years 7 months

NUMBER OF PUPILS COMPLETING THE PRIMARY COURSE OF STUDY

Year	Boys	Average Age	Girls	Average Age
1915	750	9 years 2 months	672	9 years 7 months
1916	750	9 years 6 months	684	9 years 3 months
1917	676	9 years 4 months	736	9 years 5 months
1918	603	9 years 3 months	593	9 years 2 months
1919	595	9 years 7 months	588	9 years 9 months

LENGTH OF TIME IN COMPLETING THE COURSE OF STUDY IN THE GRAMMAR SCHOOLS

Year	In Less Than 4 Years	In 5 Years	In 6 Years	In More Than 6 Year
1915	13 per cent	52 per cent	30 per cent	5 per cent
1916	11 per cent	54 per cent	31 per cent	4 per cent
1917	13 per cent	57 per cent	26 per cent	4 per cent
1918	16 per cent	62 per cent	18 per cent	4 per cent
1919	18 per cent	64 per cent	15 per cent	3 per cent

LENGTH OF TIME IN COMPLETING THE COURSE OF STUDY IN THE PRIMARY SCHOOLS

Year	In Less Than 3 Years	In 3 Years	In 4 Years	In More Than 4 Years
1915	8 per cent	61 per cent	23 per cent	8 per cent
1916	6 per cent	57 per cent	31 per cent	6 per cent
1917	5 per cent	58 per cent	27 per cent	10 per cent
1918	5 per cent	57 per cent	33 per cent	5 per cent
1919	4 per cent	51 per cent	31 per cent	14 per cent

NUMBER OF PUPILS IN THE HIGH AND LATIN SCHOOL, DECEMBER, 1919

Year	Boys	Girls	Total	Per cent
Post Graduate	11	14	25	.015
Twelfth	105	190	295	.146
Eleventh	132	234	366	.180
Tenth	165	364	529	.260
Ninth	248	559	807	.399
Totals	661	1,361	2,022	

NUMBER OF PUPILS IN THE RINDGE TECHNICAL SCHOOL, DECEMBER, 1919

Year	Boys		Per cent
Twelfth	70	This school is for boys only. It became a part of the public school system January 1, 1899.	.102
Eleventh	129		.187
Tenth	160		.479
Ninth	331		.232
Total	690		

NUMBER OF PUPILS IN THE GRAMMAR SCHOOLS, DECEMBER, 1919

Year	Boys	Girls	Total	Per cent
Eighth	532	511	1,043	.156
Seventh	608	606	1,214	.183
Sixth	705	741	1,446	.232
Fifth	792	758	1,550	.217
Fourth	699	715	1,414	.212
Total	3,336	3,331	6,667	

NUMBER OF PUPILS IN THE PRIMARY SCHOOLS, DECEMBER, 1919

Year	Boys	Girls	Total	Per cent
Third	766	784	1,550	.291
Second	862	837	1,699	.316
First	1,058	956	2,114	.393
Total	2,686	2,577	5,363	

NUMBER OF PUPILS AND TEACHERS IN THE KINDERGARTENS

Year	Boys	Girls	Total	Number of Teachers
1915	343	380	723	30
1916	336	301	637	33
1917	423	407	830	33
1918	356	351	707	32
1919	419	382	801	31

NUMBER OF AGE AND SCHOOLING CERTIFICATES ISSUED

1914	1915	1916	1917	1918	1919
1,112	1,109	2,354	3,347	4,229	3,004
*5,509	*4,691	*7,163	*7,226	*7,967	*5,749

*Issued to minors over sixteen years of age.

SUMMARY

Number of pupils belonging in December, 1919

Number of pupils in the High and Latin School	2,020
Number of pupils in the Rindge Technical School	703
Number of pupils in the Grammar Grades	6,608
Number of pupils in the Primary Grades	5,201
Number of pupils in the Kindergartens	801
Number of pupils in the Open Air Classes	1,140
Number of pupils in Special Classes	162
Number of pupils in the Ungraded Classes	96
Number of pupils in the public schools, December, 1919	15,731
Number of pupils in the public schools, December, 1918	15,578
Decrease of pupils, December, 1919	153

Increase of pupils, 1910	262
Decrease of pupils, 1911	305
Decrease of pupils, 1912	147
Decrease of pupils, 1913	407
Increase of pupils, 1914	196
Increase of pupils, 1915	127
Increase of pupils, 1916	482
Increase of pupils, 1917	91
Decrease of pupils, 1918	81
Decrease of pupils, 1919	153

NUMBER OF PUPILS REGISTERED IN THE EVENING DRAWING SCHOOLS, WITH THE AVERAGE ATTENDANCE

	1916–1917	1917–1918	1918–1919	1919–1920
Number registered	64	52	59	87
Average attendance	25	24	21	36

NUMBER OF PUPILS REGISTERED IN THE EVENING INDUSTRIAL SCHOOL, WITH THE AVERAGE ATTENDANCE

	1916–1917	1917–1918	1918–1919	1919–1920
Number registered	217	180	257	360
Average attendance	84	74	93	134

NUMBER OF PUPILS REGISTERED IN THE EVENING HIGH SCHOOL, WITH THE AVERAGE ATTENDANCE

	1916–1917	1917–1918	1918–1919	1919–1920
Number registered	886	902	523	490
Average attendance	444	354	234	241

NUMBER OF PUPILS REGISTERED IN THE EVENING ELEMENTARY SCHOOLS, WITH THE AVERAGE ATTENDANCE*

	1916–1917	1917–1918	1918–1919	1919–1920
Number registered	2,055	1,643	968	1,428
Average attendance	831	708	492	631

*Including the Evening Trade School for Women.

TABULAR VIEW
Teachers in Service, April, 1920

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
High and Latin School			
Leslie L. Cleveland	Head Master	Williams College, A.B.	Jan. 1910
Chester M. Bliss	Master	Amherst College, A.B., A.M.	Sept. 1907
Thomas L. Bramhall	"	Harvard University, A.B.	Sept. 1910
George H. Cain	Teacher	Potomac College, A.B.	Sept. 1909
Joseph A. Coolidge	"	Harvard University, A.B., A.M.	Mar. 1892
James M. Cunningham*	"	(Cambridge High Schools. Cambridge Commercial College, 2 years)	Oct. 1916
Cecil T. Derry†	"	Harvard University, A.B., A.M.	Oct. 1905
Timothy F. Downey	"	Harvard University, A.B.	Sept. 1912
George H. Glasheen	"	Fitchburg Business College. Boston University, B.B.A.	Oct. 1914
Horace E. Jacobs	"	Brown University, A.B., A.M. (Medical School, 1 year)	Oct. 1915
Francis J. Lally	"	Boston High School. (Bryant and Stratton's Commercial School, 13 months)	Sept. 1916
James H. Leonard	"	Harvard University, A.B. (Law School, 1 year. Graduate School, 1 year)	Sept. 1915
John G. Wolcott	"	Harvard University, A.B.	Sept. 1915
Alice C. Baldwin	"	Wellesley College, A.B.	Sept. 1895
Margaret M. Ball	"	Lawrence University, Wis., A.B.	Feb. 1912
Edith T. Bates	"	Framingham Normal School (Course at Simmons College)	Sept. 1909
Margaret S. Bradbury	"	Radcliffe College, A.B.‡	Jan. 1902
Alice M. Brown	"	Normal School of Gymnastics. (Special Courses)	Sept. 1910
Natalie A. Browning	"	Radcliffe College, A.B.‡	Sept. 1916
Katharine A. Burke	"	(Special Courses in Sewing, etc.)	Oct. 1907
Isabel S. Burton	"	(Private schools and studied abroad)	Sept. 1899
Anna P. Butler	"	Trinity College, Washington, D. C. A.B.‡	Sept. 1909
Grace M. Cassiday	"	Brockton Business College. (Courses at Simmons College and Boston University)	Sept. 1916
Ethel E. Carr	"	Radcliffe College, A.B.	Sept. 1908
Alice D. Chamberlain	"	Radcliffe College, A.B.	Sept. 1900
Caroline Close	"	Cambridge Training School. (Special Courses)	Nov. 1874
Bertha L. Cogswell	"	Boston University, A.B., A.M.	Jan. 1894
Grace A. Coyle	"	Radcliffe College, A.B.	Sept. 1912
Gertrude H. Crook	"	Boston University, A.B. Radcliffe College, A.M.	Sept. 1896
Grace L. Deering	"	Maine Seminary. (Courses abroad and at Radcliffe College)	Feb. 1892
Grace E. Dennett	"	Radcliffe College, A.B., A.M., Simmons College, S.B.	Sept. 1907

*On leave of absence.
†Resigned June, 1911, and reappointed September, 1912.
‡Attended the Wellington Training School.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
High and Latin School, Con.			
Mary L. Dichl	Teacher	English High School. (Attended College of Commerce, Simmons College and Harvard Summer School)	April 1915
Esther S. Dodge	"	Boston University, A.B.	Oct. 1897
Sarah Dolan	"	Radcliffe College. A.B.	Sept. 1916
Ellen C. Doherty	"	Radcliffe College, A.B.‡	Sept. 1915
Elizabeth M. Driscoll	"	Boston University, A.B.	Mar. 1914
Lillian E. Edgerly	"	Farmington, N. H., High School. (Bradford Academy, 1 year, Western College, Ohio, 1 year. Bryant & Stratton's Business College)	Sept. 1916
Ruth B. Elliott	"	Iowa State Normal School. (Bryant and Stratton's Business College)	Sept. 1916
Sara L. Fisher	"	Smith College, A.B.	Sept. 1910
Elizabeth B. Flanders	"	Framingham Normal Art School. (Courses at Radcliffe)	Sept. 1905
Louise A. Forrest	"	Boston University, A.B.	Feb. 1913
Florence H. French	"	Radcliffe College, A.B.	Nov. 1909
Edith M. Gartland	"	Radcliffe College, A.B.‡	Sept. 1915
Josephine V. Hagarty	"	Chicopee Normal School, Bay Path Commercial Institute. (Courses at Harvard and Simmons Colleges)	Sept. 1918
Mary C. Hardy	"	Smith College, A.B.	Dec. 1891
Lillian R. Hartigan	"	Emerson College of Oratory‡	June 1915
Elizabeth L. Huling	"	Radcliffe College, A.B., A.M.	Sept. 1905
Sarah W. Kelly	"	Wellesley College, A.B.	Feb. 1911
Grace E. Knight	"	Wellesley College, A.B.‡	April 1914
Maud A. Lawson	"	Radcliffe College, A.B.	Sept. 1892
Katherine B. Lyons	"	Radcliffe College, A.B.	Sept. 1915
Ethel M. MacLeod	"	Radcliffe College, A.B.‡	Mar. 1906
Gertrude M. Mason	"	Gorham, Me., Normal School. Bryant and Stratton's Com. Col., Springfield, Mass.	Feb. 1912
Inez McCaffrey	"	Radcliffe College, A.B. (Post-graduate course at Brown University)	Sept. 1915
Mary R. McCarthy**	"	Radcliffe College, A.B.	Dec. 1914
Beatrice M. McDonald	"	Salem Normal School, Commercial Course, 3 years	Sept. 1916
Ethel G. McElroy	"	Radcliffe College, A.B., A.M.	Sept. 1911
Henrietta E. McIntire	"	Radcliffe College, A.B., A.M.	Sept. 1891
Josephine A. McLaughlin	"	Posse Normal School of Gymnastics. (Sargent Normal School of Gymnastics, 1 yr.)	Oct. 1916
Esther E. Morse	"	Boston University, A.B.	Sept. 1915

**Was clerk in school from September, 1912.
‡Attended the Wellington Training School.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
High and Latin School, Con.			
Helen F. Morton	Teacher	Massachusetts Normal Art School	Apr. 1914
Jane O. Mosher	"	Boston University, A.B.°	Sept. 1911
Mary Moulton	"	(Attended Wellesley College 3 years. Special Courses and studied abroad)	Sept. 1890
Mary E. Murray	"	Radcliffe College, A.B.	Sept. 1908
Louisa P. Parker	"	Westfield Normal School. (Courses at Radcliffe College)	Mar. 1881
Jane G. Ricker	"	Cambridge Latin School. (Radcliffe College, 2 years.) (Special Courses. Studied abroad)	Sept. 1915
Lillian C. Rogers	"	Boston University, A.B.	Sept. 1893
Eva M. Ruggli	"	Radcliffe College, A.B.	Feb. 1912
Hilda Russell	"	Wellesley College, A.B. Kindergarten Training School°	Sept. 1912
Ethel V. Sampson	"	Radcliffe College, A.B.	Sept. 1899
Caroline A. Sawyer	"	Boston University, A.B., Radcliffe College, A.M.	Sept. 1886
Adele Schroder	"	(Radcliffe College, 2 years) (Studied abroad)	Feb. 1916
Madeleine L. Slade	"	Salem Normal School. (Simmons College Summer School)	Sept. 1916
Florence W. Smith	"	Radcliffe College, A.B.	Sept. 1897
Martha R. Smith	"	Boston Normal School. (Courses at Harvard and private courses)	Jan. 1882
Delia M. Stickney	"	Institute of Technology, S.B.	Sept. 1888
Jennie S. Spring	"	Smith College, A.B.	Mar. 1886
Annie F. Stratton	"	Radcliffe College, A.B.	Sept. 1899
Blanche E. Townsend	"	Salem Normal School. (Special Courses)	Sept. 1900
Agnes L. Tracy	"	Cambridge High School. (Radcliffe College, 3 years)	Oct. 1904
Anna M. Walsh	"	Smith College, A.B. °	April 1914
Winifred A. Waters	"	Boston University, A.B.°	Sept. 1914
Mabel D. Watson	"	Radcliffe College, A.B.	Sept. 1901
Lucy T. White	"	Sargent School for Physical Education	April 1913
Alice S. Willoughby	"	Mass. Normal Art School. (Radcliffe College, 1 year)	Mar. 1914
Madeleine Wood	"	Radcliffe College, A.B.°	Sept. 1907
Bessie L. Forbes	Dietitian	Miss Farmer's School of Cookery. (Courses at Columbia University and Simmons College)	Sept. 1916

°Attended the Wellington Training School.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
h and Latin School —Con.			
Leander A. MacDonald	Teacher-Coach	Bridgewater Normal School. Harvard College, 1 year. Tufts College, 1 year	Sept. 1918
Katherine S. Carroll	Secretary	Bryant and Stratton's Commercial College	Nov. 1914
Rosemary Horgan	Secretary	Cambridge Latin School. Radcliffe College, 3 years	Mar. 1920
Rindge Technical School			
John W. Wood, Jr.	Head Master	Harvard University, S.B.	Jan. 1899
James F. Conlin	Master	Harvard University, A.B., A.M.	Feb. 1905
Myra I. Ellis	Teacher	Cambridge Training School. (Berlin University)	Feb. 1878
Caroline L. Blake	"	Wheaton College, A.B. (Special Courses)	Sept. 1894
Mary H. Cunningham	"	Simmons College	Sept. 1918
Gertrude B. Rogers	"	(Attended Colby College, 2 years.) Tufts College, 2 years, A.B.	Feb. 1911
Anna R. Ward	"	Indiana State University, A.B.	Sept. 1909
Ingolf V. Bockmann	"	Norway Technical School. (Attended Sloyd Schools)	Feb. 1911
Edgar R. Breed	"	Mass. Normal Art School	Nov. 1912
Edward P. Chester*	"	Clark College, A.B. (Attended Columbia College, 2 summers)	Nov. 1914
Burton L. Cushing	"	Institute of Technology	Oct. 1914
Joseph B. Davison*	"	Malden High School. (Special Courses)	Apr. 1909
Raymond A. FitzGerald	"	Harvard University, S.B., graduate School Courses, Division of Education, Harvard University, 3 years	Sept. 1913
Walter R. Gilbert	"	Somerville High School. (Special Courses	Oct. 1919
rge H. Gohlke	"	University of Wisconsin, B.L.	Sept. 1911
Evan W. Griffiths	"	Harvard University, A.B., A.M.	Sept. 1903
John C. Hall	"	Boston University, S.B.	Sept. 1908
Charles C. Jones	"	Warner, N. H., High School	Sept. 1911
Francis P. Jordan	"	Attended Waltham High School	Oct. 1919
Lester W. Ladd	"	Harvard University, B.A.S.	Sept. 1910
Charles A. Linehan	"	Harvard University, S.B.	Sept. 1914
Edward R. Markham	"	Wesleyan Academy. (Courses in Mechanical Engineering)	Sept. 1903
James T. McElligott	"	Harvard University, A.B., A.M. (Division of Education)	Sept. 1915
William Mullins	"	University of Maine, A.B.	Sept. 1916
Joseph M. Norton	"	Dartmouth College, A.B.	Sept. 1899

* Temporary teacher from October, 1918.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Rindge Technical—Con.			
Martin F. O'Connor	Teacher	Boston College, A.B. Courses Graduate School, Division of Education, Harvard University, 3 years	Sept. 1914
Abbott O. Paine	"	Rindge Manual Training School	Sept. 1915
Otis A. Philbrick	"	Mass. Normal Art School	Sept. 1911
Leverett L. Preble	"	(Private Instruction and Shop Experience. Special Courses)	Sept. 1910
Charles H. Richert	"	Boston Normal Art School	Dec. 1905
James G. Telfer	"	Common Schools	June 1889
Marion L. Pike	Secretary	Cambridge Latin School	Sept. 1909
Agassiz School			
Maria L. Baldwin	Master	Cambridge Training School. (Courses at Harvard)	Sept. 1882
Lillian M. Cuddy	Master'sAsst.	Salem Normal School°	Dec. 1904
Marion Beane	6-5	Mt. Holyoke College, A.B.	Jan. 1911
Susan L. Senter	7	Medway High School°	Sept. 1898
Marietta L. McNamara	7	Cambridge High School. (Attended Salem Normal School)	Nov. 1912
Ada M. Litchfield	5-4	Boston Normal School°	May 1891
Clara W. Ruggli	5-4	Bridgewater Normal School. (Special College Course)°	Sept. 1900
Frances W. Dawson	4	Bradford Academy. (Special Courses)	Sept. 1902
Lucy A. Roper	3	Salem Normal School°	Sept. 1907
Rose M. Hill	1	Kindergarten Training School°	Sept. 1911
Grace C. Stedman	1	Cambridge High School. Kindergarten Training School	May 1896
Katherine C. Hussey	3-2	Kindergarten Training School°	Nov. 1912
Boardman School			
Elizabeth J. Karcher	Principal	Cambridge Training School. (Special Courses)	May 1881
Blanche M. Gould	3	Colby Academy, N. H. (Boston University, 2½ years)°	Oct. 1904
Sybil L. M. Cronin	1	Salem Normal School°	Sept. 1912
Malvina M. Joslin	2	Northfield, Vt., Normal School. (Hyannis Normal School. Summer Course)°	May 1891
Mary C. Ward	2	Salem Normal School°	Mar. 1911
Mabel E. Blake	1	North Andover High School. (Salem Normal School, 1 year)	Jan. 1892
Mary K. Kelley	1	Framingham Normal School°	Nov. 1915
Gertrude Gorman	1	Salem Normal School	Oct. 1919
Ellis School			
Ernest Libby	Master	Bridgewater Normal School. (Chicago University)	Sept. 1906

°Attended the Wellington Training School

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also other Courses)	Date of Appointment
Ellis School—Con.			
Katharine M. Greene	Master'sAsst.	Salem Normal School°	Sept. 1904
Adelaide G. Bunker	8	Castine, Me., Normal School. (Attended Bridgewater Normal School)	Nov. 1902
Mary A. Stephenson	8	Bridgewater Normal School°	Sept. 1898
Florence M. Dudley	5	Salem Normal School°	Dec. 1897
Mary T. Cashman	6	Salem Normal School°	Nov. 1915
Mary A. Macklin	6	Salem Normal School°	Dec. 1902
Ellen T. O'Keefe	5	Boston Normal School, (College Courses)	Sept. 1903
Kathryn A. Biggane	6	Lowell Normal School	Nov. 1918
Alice G. Dacey	5	Salem Normal School°	Jan. 1909
Katharine F. Leahy	5–4	Salem Normal School°	Sept. 1916
Katharine L. Dolan	Pre-vocat'n'l	Salem Normal School	Nov. 1898
Felton School			
C. Florence Smith	Prin. 3	Boston Normal School. (Harvard Summer School)°	Jan. 1888
Annie M. Street	3	Westfield Normal School. (Attended Summer Institute)	Sept. 1889
Marcia R. Bowman	2	Framingham Normal School°	Sept. 1895
Sarah L. O'Reilley	1	Salem Normal School°	Jan. 1915
Carrie H. Smith	1	Cambridge Training School	Jan. 1875
Agnes C. Doherty	Open Air	Kindergarten Training School°	Sept. 1913
Marguerite E. Brenner	Open Air	Lowell Normal School	Nov. 1918
Fletcher School			
George B. Colesworthy	Master	Bowdoin College, A.B., Harvard University, A.B.	Sept. 1903
Nellie A. Coburn	Master'sAsst.	Lowell High School. (Attended Private Seminary)	Sept. 1901
Emma G. Wentworth	7	Salem Normal School°	Oct. 1902
Alice M. Chamberlain	7-6	Salem Normal School°	Sept. 1913
Mary I. Chapin	6	(Attended Indiana Normal School)	Oct. 1904
Frances E. Higgins	5	Cambridge High School	Sept†1894
Helena M. Maguire	5-4	Salem Normal School°	Jan. 1915
Elmira F. Hall	4	Cambridge High School°	May†1897
Gertrude M. Baker	3	Radcliffe College, A.B.°	Sept. 1905
Martha B. Perkins	3	Salem Normal School	Sept. 1904
Catherine Culhane	2	Kindergarten Training School°	Jan. 1915
Mae E. Sullivan	2	Lowell Normal School	Nov. 1919
Eva A. Taylor	2-1	Cambridge High School°	May 1886
Margaret E. Jones	1	Kindergarten Training School°	Sept. 1913
Ethel M. Cooper	1	Lowell Normal School	Nov. 1915
Rebecea C. Feeny**	1	Salem Normal School	Sept. 1919
Eleanor E. O'Brien	Ungraded	Salem Normal School°	Sept. 1909

°Attended the Wellington Training School
†Taught previous to this and resigned.
*§Assigned to the factory class at the American Rubber Company.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Gannett School			
Mary A. Rady	Prin. 2	Normal School and School of Expression. (Special Courses)	Sept. 1880
Elizabeth A. Carroll	3	Framingham Normal School°	Jan. 1915
Annie M. Billings	2	Cushing Academy. (Attended Quincy Training School)	May 1893
Julia V Looney	2	Salem Normal School	Dec. 1919
Margaret M. McLaughlin	1	Lowell Normal School°	Nov. 1915
Gore School			
Mary E. Mulloney	Principal	Cambridge Training School. (Special Courses)	Sept. 1878 Dec. 1908
Catherine L. Dinneen	3	Salem Normal School°	
Anastasia R. Peters	3	Newton High School. (Special Courses)°	Oct. 1892 Nov. 1918
Lillian M. Brown	1	Lowell Normal School°	Oct. 1894
Julia G. McHugh	2	Salem Normal School°	Sept. 1883
Anna E. Callahan	1	Salem Normal School	Sept. 1913
Marguerite F. Doherty	1	Lowell Normal School°	
Katharine A. Hegarty	1	Coburn, Me., Classical Institute. (Special Courses)	Sept. 1896
Agnes M. Harrington	1	Salem Normal School	Oct. 1919
Frances M. Donovan	Ungraded	Kindergarten Training School°	Nov. 1912
Haggerty School			
Harold B. Blazo	Master	Harvard University, A.B.	Sept. 1910
Clintina E. Curtis	Master'sAsst.	Plymouth, N. H., Normal School	Dec. 1907
Alice C. Sullivan	7	Fitchburg Normal School°	Nov. 1915
Margaret G. Cronin	6	Fitchburg Normal School	Feb. 1917
Katharine A. Brennan	5	Bridgewater Normal School	Nov. 1918
H. Maud Maclean*	5	University of New Brunswick, B.A.°	
Julia M. Davis	4	Baltimore High School. (Maryland Normal School, 1 year)	Mar. 1896 May 1900
Louise A. Kelley	3	Lowell Normal School°	Dec. 1911
Anna G. Lynch	2-1	Lowell Normal School	Jan. 1919
Mary A. O'Connor	2	Salem Normal School°	Nov. 1915
Harriet R. Harrington	1	St. Johnsbury Academy. (Special Courses)	Sept. 1897
Harvard School			
William L. MacGregor	Master	Richmond, N. S., High School. (Attended Hyannis Normal School)	Sept. 1906
Katharine L. Carr	Master'sAsst.	Potsdam, N. Y., Normal School	Nov. 1901
Marcia E. R. Hardy	8	Farmington, Me., Normal School (Maine Seminary, 2 terms)	Sept†1916
Lucy E. Sullivan	8	Framingham Normal School	Nov. 1909
Addie L. Bartlett	7	Castine, Me., Normal School (Special Courses at Harvard)	Sept. 1890
Marguerite L. Harris	7	Framingham Normal School°	April 1914

°Attended the Wellington Training School.
*On leave of absence.
†Taught previous to this and resigned.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Harvard School—Con.			
Katherine F. Smith	5	Bridgewater Normal School°	Sept. 1912
Frances Fabyan	6	Cambridge Training School	Jan. 1878
Annie B. Lowell	6	Portland, Me., Normal School	April 1898
Elizabeth L. Setchell	6	Salem Normal School	Sept†1888
Margaret M. Fearns	5	Salem Normal School°	Mar. 1897
Grace I. Nelligan	5	Salem Normal School°	Sept. 1911
Esther M. Spauding	7	Framingham Normal School°	Nov. 1918
Helen M. Welch	4	Lowell Normal School	Nov. 1918
May M. Strong	4	Gloucester High School. Gloucester Training School. (Special Course in Boston)	May 1917
Lillian B. Dorney	4	Framingham Normal School°	Jan. 1920
Carolyn E. Macdonald	Special	Salem Normal School°	Jan. 1909
Houghton School			
James E. White	Master	Bridgewater Normal School. Sloyd School. (Special Courses)	Jan. 1906
R. Emily Penney	Master'sAsst.	Salem Normal School° (Special Courses)	June 1893
Helene M. Seils	7	Salem Normal School°	Sept 1909
Margaret J. Penney	6	Cambridge Training School. (Special Courses)	April 1882
Hattie Shepherd	6	Cambridge Training School. (Special Courses)	Sept. 1882
Katharine F. Callahan	5	Salem Normal School°	Nov. 1903
Mary L. Edmunds	5	Salem Normal School°	Jan. 1915
Grace S. Beckwith	4	Westfield Normal School. (Special Courses)°	Sept†1904
Mary T. Shea	4	Lowell Normal School°	Sept. 1912
Mary G. Snow	3	Salem Normal School°	Sept. 1905
Anastasia Donovan	3	Salem Normal School	Sept. 1919
Mary F. Fitzgerald	3	Salem Normal School°	Sept. 1912
Jennie E. Brooks	2	Salem Normal School°	Sept. 1910
Elizabeth M. Kline	1	Salem Normal School°	Sept. 1912
Elizabeth D. Pierce	1	Kindergarten Training School (Special Courses)°	Sept. 1913
Norah T. Linehan	Special	Kindergarten Training School	Apr. 1917
Josephine G. Lynch	Special	Lowell Normal School	Nov. 1919
Kelley School			
H. Warren Foss	Master	Colby College, A.B. (Courses at Harvard)	Sept. 1904
Catharine A. McLean	Master'sAsst.	Salem Normal School°	Oct. 1899
Emma J. Houlahan	7	Salem Normal School°	Sept. 1903
Florence E. Hunter	7	Castleton, Vt., Normal School. (Troy Conference Academy, 3 years. Summer Schools. Boston University Extension Courses)	Feb. 1900

°Attended the Wellington Training School.
†Taught previous to this and resigned.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Kelley School—Con.			
Esther D. Paul	6	Boston University, A.B.°	Oct. 1899
Ellen A. Kidder	6	(Teachers' Courses and Summer Courses at Harvard)°	Oct. 1890
Maude M. Dutton	5	Bridgewater Normal School°	Oct. 1899
Grace F. Mullins	5	Salem Normal School°	Jan. 1915
Anna W. Browning	4	Plymouth, N. H., Normal and Training School. (Special Courses at Radcliffe)	Nov. 1917
Fannie M. Field	4	Bridgewater Normal School	Sept. 1909
Eva G. Oakes	3	Warren High School. (Martha's Vineyard Summer School, 5 years)°	Oct. 1898
Helena O'Loughlin	2	Lowell Normal School°	Nov. 1915
Ellen T. Carroll	2	Kindergarten Training School°	Sept. 1907
Olive L. Cook	1	Framingham Normal School. (Summer Courses)	April 1905
Elizabeth M. McCann	1	Salem Normal School°	Apr. 1917
Mary A. Maguire	1	Salem Normal School°	Sept. 1913
Mary E. Regan	Special Class	Salem Normal School°	Oct. 1899
Lowell School			
Margaret Kidd	Prin. 4	Cambridge Training School. (Special Courses)	Sept. 1880
Mary B. Cullinan	3-2	Bangor High School. Bangor Training School	Sept. 1917
Eliza F. McLean	1	Sudbury High School. Private Business School. (Hyannis Normal School, 2 years)	April 1918
Merrill School			
Louise W. Harris	Principal	Cambridge Training School. (Special Courses)	Jan. 1876
Katharine Pendergast	3	Warren High School°	Sept. 1909
Nellie F. Walker	2-3	Kennebunk, Me., High School. (Attended Com. College)	Sept. 1899
Margaret F. Dwyer	2	Kindergarten Training School	Feb. 1914
Margaret C. Boland	2	Bridgewater Normal School°	Dec. 1916
Marion B. Magwire	1	Framingham Normal School°	June 1894
Gertrude S. Thayer	1	Salem Normal School°	Sept. 1903
Margaret O'Reilly	1	Salem Normal School	Nov. 1919
Morse School			
John J. Salmon	Master	Holy Cross College, A.B. Clark University, A.M.	Sept. 1916
Elizabeth H. Richards	Master's Asst.	Robinson Seminary, N. H.°	Jan. 1899
Anna A. O'Connell	8	Bridgewater Normal School. (University and Private Courses)°	Sept. 1900
Winifred L. Kinsley	7	Boston Normal School°	Sept†188
Edith M. Carman	7	Salem Normal School°	Dec. 190

°Attended the Wellington Training School.
†Taught previous to this and resigned.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Morse School—Con.			
Lucy M. Soulee	6	Everett High School. (Boston University and Private Courses, Dartmouth College Summer School)	Sept. 1893
Alice E. May	6	Bridgewater Normal School	Oct. 1893
Mary E. Warren	5	Lawrence Academy, Groton. (Hyannis Normal and N. Adams Training Schools)	Jan. 1902
Mary H. Manning	5	Salem Normal School°	Sept. 1913
Ida J. Holmes	4	R. I. Normal School. (Summer Courses and Private Lessons)	Sept. 1895
Anna F. Kelley	4	Framingham Normal School	Nov. 1918
Elizabeth J. Baldwin	3	Boston Normal School°	Jan. 1886
Christina R. Denyven	3	Bridgewater Normal School. (Special Courses)°	Jan. 1888
Agnes J. Moran	2	Salem Normal School°	Sept. 1909
Margaret F. Toole	2	Bangor Training School	Sept. 1919
Anna L. P. Collins	1	(Attended Plymouth, N. H., Normal School)	Sept. 1893
Alice A. Harrington	1	Salem Normal School°	Nov. 1915
Parker School			
Mary A. Knowles	Principal	Billerica High School. (Special Courses)	Sept. 1897
Rose M. O'Toole*	3	Fitchburg Normal School. (Post-Graduate Course, 2 years)	Jan. 1910
Mary A. O'Callaghan	3	Cambridge English High School. (Attended Salem Normal School)	Sept. 1913
Cordelia C. Rowe	2	Cambridge English High School. (Courses at Hyannis and Harvard)	Dec. 1919
Agnes Marchant	1	Mt. Holyoke Seminary. Bridgewater Normal School. (Special Courses)	Oct. 1894
Eleanor M. O'Toole	1	Fitchburg Normal School	Nov. 1919
Peabody School			
Frederick B. Thompson	Master	Teachers' School of Science. Bridgewater Normal School	Nov. 1894
Anna F. Bellows	Master'sAsst.	Lancaster Academy	Sept. 1889
Frances F. Curtis	7-8	Bridgewater Normal School. (Special Courses)	Mar. 1898
Susan C. Allison	7	Cambridge High School. (Attended Boston Normal School)°	Sept. 1889
Helen A. Abbott	6-7	Radcliffe College, A.B.°	Sept. 1911
Bernice E. Bartlett	6	Emerson College of Oratory°	Sept. 1907

*On leave of absence.
°Attended the Wellington Training School.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Peabody School—Con.			
Anna H. Welsh	6	(Attended Wellesley College 2 years)‡	Sept. 1901
Blanche C. Trefethen	5	Normal Department, Robinson Seminary‡	Mar. †1895
Tina M. King	5	Bridgewater Normal School‡	Sept. 1908
Butella E. L. Conland	4	Randolph, Vt., Normal School	Dec. 1898
Mary A. Burke	3	Salem Normal School‡	Sept. 1885
Edith F. Pulsford	2	Kindergarten Training School‡	Sept. 1910
Elizabeth Higgins	2	Lowell Training School	Nov. 1919
Maud E. Brown	1	Kindergarten Training School‡	Jan. 1915
Clara A. Goodere*	1	Fitchburg Normal School	Jan. 1910
Minnie H. Ketchum	1	Kindergarten Training School‡	Sept. 1913
Putnam School			
John H. Graham	Master	Bridgewater Normal School. (Boston University Extension Courses)	June 1913
Maude M. Mixer	Master'sAsst.	Teachers' School of Science Bridgewater Normal School.	Sept. 1905
Sarah M. Grieves	7	Cambridge Training School	Oct. 1882
Margaret F. O'Keefe	7	Salem Normal School‡	Sept. 1900
Annie M. R. Sturtevant	6	Wellesley College, A.B.‡	Dec. 1907
Martha Chisholm	6	Gloucester Training School. (Special Courses)	Sept. 1907
Jane E. McKearin	5	Wellesley College, A.B.‡	Sept. 1907
Lena L. Ramhofer	5	Salem Normal School‡	Sept. 1912
Florence A. Hickey	4	Salem Normal School‡	Sept. 1912
Mary A. Carmichael	4	Salem Normal School	Feb. 1889
Annie A. Trelegan	4	Salem Normal School. (Special Courses)‡	Dec. 1891
Nellie A. Kerrigan	(Pre-Vocational Class)	Salem Normal School‡	Oct. 1904
Roberts School			
W. Mortimer MacVicar	Master	Acadia College, N. S., A.B., A.M. (Harvard Graduate School, 2 years)	Sept. 1900
Louise H. Griswold	Master'sAsst.	Terryville High School. (Special Courses)	Sept. 1893
Caroline M. Williams	8	Cambridge Training School	Sept. 1880
Dora Leadbetter	7	Framingham Normal School. (Radcliffe College 2 years)	Sept. 1906
Harriette E. Shepard	7	Salem Normal School. (Special Courses)	Oct. 1890
Bessie W. C. Fuller	6	Vermont Academy, 2 years. (Hyannis Normal School, 2 summers)	Sept. 1909
Mary E. Flahavan	6	Lowell Normal School. (Courses at Boston College and University Extension Courses)‡	Sept. 1913

*On leave of absence.
†Resigned for one year and was reappointed.
‡Attended the Wellington Training School.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Roberts School-Con.			
Catherine M. Connell	6	Lowell Normal School	Nov. 1918
Evelyn B. Kenney	5	Castine, Me., Normal School. (Course at Harvard)	Nov. 1886
M. Louise Gallagher	5	Bridgewater Normal School‡ (Special Courses)	Jan. 1915
Helena R. Riley	5	Bridgewater Normal School‡	Feb. 1917
Mary M. Brigham	4	Winchenden High School. (Special Courses)	April 1882
Anna E. Dailey	4	Salem Normal School‡	Sept. 1910
Martha L. Kivlan	4	Lowell Normal School‡	Mar. 1918
Helen M. Long	Open Air	Salem Normal School‡	Jan. 1915
Henriette E. de Rochemont	Open Air	Portsmouth, N. H., Normal School	Sept. 1894
Russell School			
Arthur C. Wadsworth	Master	Harvard University, S.B., Wooster Univ., Ohio, A.M., Ph.D. Bridgewater Normal School	Sept. 1897
Mary S. Bingham	Master'sAsst.	Salem Normal School. (Special work at Radcliffe)	Sept. 1904
Sara S. Coyne	5	Salem Normal School‡	Feb. 1912
Ida J. Mahoney	7	Framingham Normal School‡	April 1903
Josephine F. Rowe	6	Salem Normal School‡	Mar. 1909
Margaret M. Carroll	6	Salem Normal School‡	Sept. 1911
Marguerite E. Porter	5	Framingham Normal School‡	Oct. 1911
Annie W. Cooper	4	Salem Normal School‡	Sept. 1911
Harriet Hanson	5	Simmons College. Attended Bridgewater Normal School	Apr. 1919
Claire M. Sullivan	3	Salem Normal School‡	Sept. 1910
Alice V. Connelly	2	Salem Normal School‡	Sept. 1908
Alice Ford Sullivan	2	Kindergarten Training School‡	Jan. 1915
Carrie J. Allison	1	Cambridge High School. (Private School)‡	Sept. 1896
Evelyn F. Leddy		Salem Normal School	Dec. 1918
Shepard School			
Anna E. Welch	Principal	Salem Normal School‡	Sept. 1904
Alice M. Gage	5	High School. (Mt. Holyoke College, 2 years)	Mar. 1900
Mary F. Calnane	5	Salem Normal School. Boston University, B.B.A.	Dec. 1896
Anna G. Scannell	3	Salem Normal School‡	Sept. 1905
Agnes K. Geary	2	Salem Normal School‡	Jan. 1909
Catherine T. Murphy	1	Salem Normal School‡	Nov. 1915
Mary H. Brooks	1	Bridgewater Normal School	Sept. 1898
Nettie I. Haff	Special	Salem Normal School‡	Sept. 1906

‡Attended the Wellington Training School.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Sleeper School			
Elizabeth G. Nelligan	Principal	Cambridge English High School. (Attended Salem Normal School. Summer Schools and Extension Courses at Harvard College, Simmons College and Boston University)‡	Dec. 1899
Melissa M. Lloyd	5	Charlestown High School. (Special Courses)	Sept†1893
Cora B. Poole	4	Salem Normal School‡	Feb. 1906
Evelyn M. Dormer	3	Salem Normal School‡	Dec. 1897
Katherine A. Mahoney	3-2	Salem Normal School‡	Sept. 1913
Catherine M. Herlihy	2	Salem Normal School‡	Sept. 1913
Margaret W. Murphy	1	Kindergarten Training School‡	Jan. 1915
Mary R. Harrington	1	Salem Normal School‡	Oct. 1910
Tarbell School			
Carrie P. Pierce	Prin. 2	Gloucester High School. (Salem Normal School, 1 year.) (Special Courses)‡	Oct. 1890
Millie A. Isaac	3	Salem Normal School. (Evening Freehand Course, Massachusetts Normal Art School, 2 years)‡	Sept. 1909
Mary S. Redican	2	Kindergarten Training School	Sept. 1915
Anna F. Moran	1	Kindergarten Training School. (Evening Course at Boston College)‡	Sept. 1911
Lillian M. Tynes	1	Salem Normal School‡	Sept. 1913
Taylor School			
Mary A. Boland	Principal	Salem Normal School. (University Extension and Private Courses)‡	Jan. 1898
Emma M. Goodwin	3	Farmington, Me., Normal School. (Special Courses)	Feb. 1910
Mary A. Lincoln	3	Bridgewater Normal School. (University Extension and Private Courses)	Oct. 1912
Gertrude A. Murphy	2	Salem Normal School. (Special Courses)‡	Sept. 1912
Mary R. Collins	2	Lowell Normal School. (Summer School Course)‡	Sept. 1914
Alice W. Gaughan	1	Salem Normal School. (Special Courses)‡	Mar. 1911
Annie A. Rea	1	Castine, Me., Normal School. (Special Courses)	Sept. 1909
Irene F. Kline	1	Lowell Nornal School.	Jan. 1920
Mary A. O'Toole	Special Class	Lowell Normal School‡	Dec.†1912

†Taught previous to this and resigned.
‡Attended the Wellington Training School.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Thorndike School			
Francis J. O'Hara*	Master	Boston College, A.B., A.M. Boston Normal School	Sept. 1912
Harriet A. Townsend	Master'sAsst.	Framingham Normal School. (Special Courses)	Sept. 1887
Alice G. Nolan	7-6	Salem Normal School	Nov. 1918
Mary E. Bousquet	5	Salem Normal School‡	Sept. 1909
Grace W. Fletcher	5	Cambridge Training School	Feb. 1874
Gertrude R. O'Hara	4	Salem Normal School‡	Oct. 1910
Jennie L. Powell	4	Salem Normal School‡	Sept. 1911
Minnie A. Doran	3	Salem Normal School (Special Courses)	Sept. 1895
Caroline B. Butler	3	Lowell Normal School	Nov. 1918
Julia A. Walsh	2	Salem Normal School‡	Sept. 1910
Elizabeth B. Gahm	1	Cambridge Training School. (Special Courses)	Sept. 1882
Anna N. Sullivan	1	Boston Normal School‡	Mar. 1901
Luella M. Marsh	Open Air	Cambridge Training School.	Feb. 1884
Margaret J. McCann	Open Air	Lowell Normal School	Jan. 1920
Charlotte M. Cairnes	Special Class	Salem Normal School‡	Nov. 1915
Laura S. Westcott	Pre-Vocational Class	Boston Normal School. (Special Courses)	Sept. 1884
Webster School			
John D. Billings	Master	Bridgewater Normal School. Boston Sloyd Training School. Tufts College A.M. (Honorary)	Sept. 1872
Alice C. Phinney	Master'sAsst.	(Attended Bridgewater Normal School)	Oct. 1881
Martha N. Hanson	8	(Attended N. H. Normal School)	Mar. 1890
Josephine Hills	8	Framingham Normal School	Sept. 1893
Lydia B. McKinnon	7	Salem Normal School. (Radcliffe College, 1 year)‡	Dec.†1916
Neva L. Hanson	7	(Attended Summer Normal School Courses at Lowell Institute)	Feb. 1919
Mary T. Laffin	7	Gorham (Me.) Normal School	Dec. 1918
Ellen C. Connell	7	Boston Normal School‡	Feb. 1916
Mildred A. Farnsworth	7	Framingham Normal School	Dec. 1918
Olive L. Slater*	7	Westfield Normal School	Sept. 1899
Mabel T. Ashley	6	Framingham Normal School	Sept. 1896
Mary F. Fahey	5	Gorham (Me.) Normal School	Nov. 1917
Agnes E. Corry	6	Lowell Normal School‡	April 1914
Josephine S. Furfey	6	Salem Normal School‡	Sept. 1913
Abbie M. MacNiff	5	Fitchburg Normal School	Apr. 1916
Hilda Holman	5	Lowell Normal School. (Summer sessions at Colleges)	Nov. 1917
Minnie V. Reid	5	Boston Normal School‡	Sept. 1888
Harriet D. Cunningham	5	Salem Normal School‡	Nov. 1918

*On leave of absence.
*Acting Asst. Supt. of Schools from Oct. 15, 1918, to June 16, 1919.
**Acting Master from Nov. 4, 1918, to June 16, 1919.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Webster School—Con.			
Loretta M. O'Connell	5	Bridgewater Normal School	Nov. 1918
Magdalene M. Stumpf	5	Framingham Normal School	Dec. 1919
Mary E. Ramsdell	5	Farmington, Me., Normal School	Apr. 1920
Grace E. Dalton	4	Salem Normal School‡	Nov. 1915
Stella May Davis	4	Plymouth, N. H., Normal School	May 1917
Gertrude I. Johnson	4	Worcester Normal School	Sept. 1901
Louise Wingate	4	North Adams Normal School‡	Sept. 1912
Ada A. Billings	Special Teacher	Bridgewater Normal School	Sept. 1889
Nora P. Nason	Pre-vocational	Gorham, Me., Normal School. (Special Courses)	Dec. 1906
Wellington School			
Herbert H. Bates	Master	Westfield Normal School. (Special Courses)	Oct. 1883
Mary I. Vinton	Supervisor	Salem Normal School. (Special Courses)	Mar. 1881
Carrie H. Stevens	Master'sAsst.	Farmington, Me., Normal School. (Special Courses)	Nov. 1894
Grace F. Chamberlain	8	Framingham Normal School. (Teachers' School of Science)	April 1903
Nina L. Kendall	7	Randolph, Vt., Normal School	Sept. 1909
Ellen T. Fitzgerald	7	Bridgewater Normal School‡	Sept. 1916
Agnes M. MacLean	6	Framingham Normal School	Nov. 1918
Emily A. Moran	6	Lowell Normal School‡	Sept. 1916
Marion I. Wood	6	Salem Normal School‡	Sept. 1916
Anna M. Fitzgerald	5	Salem Normal School‡	Sept. 1916
Mary J. Murphy	5	Salem Normal School‡	Sept. 1917
Gertrude T. Noyes	5	Lowell Normal School‡	Sept. 1915
Florence M. Feeley	4	Radcliffe College, A.B.‡	Nov. 1918
Esther M. Hanley	4	Salem Normal School	Dec. 1916
Mary A. Brennan	4	Framingham Normal School	Sept. 1916
Mary E. Sullivan	4	Salem Normal School‡	Sept. 1916
Elizabeth F. Butler	3	Lowell Normal School	Sept. 1916
Anna M. Broughton	3	Salem Normal School‡	Nov. 1917
Mary A. Laffey	2	Salem Normal School‡	Sept. 1916
Anna M. Harrington	2	Salem Normal School‡	Sept. 1916
Mary Kalunian	1	Salem Normal School‡	Sept. 1916
Ruth F. Igo	1	Salem Normal School‡	Sept. 1916
Margaret Jacobs	1	Lowell Normal School‡	Sept. 1916
Mary J. Keefe	1	Fitchburg Normal School‡	Sept. 1916
Emily S. Coolidge	Ungraded	Radcliffe College, A.B.‡	Apr. 1914
M. Agnes Tierney	Ungraded	Framingham Normal School	Nov. 1918
Willard School			
Katharine E. Hayes	Principal	Framingham Normal School	Sept. 1902
Gertrude T. Sullivan	3	Salem Normal School	Dec. 1902
Alice G. Lynch	3	Lowell Normal School	Nov. 1918
Gertrude B. Maguire	3	Salem Normal School	Nov. 1918
Mildred E. Murray	3	Lowell Normal School‡	April 1918

‡Attended the Wellington Training School.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Willard School —Con.			
Lucy F. Cline	3	Kindergarten Training School‡	Oct. 1910
Elizabeth M. Crowley	2	Salem Normal School‡	Dec. 1901
M. Louise Kane	2	Kindergarten Training School	Sept. 1914
Agalina Aldrich	2	Cushing Academy. (Wellesley College, 2 years)	Sept. 1901
Dorothy R. Duvey	1	Kindergarten Training School‡	Jan. 1915
Ella F. Gulliver	1	Eastern Normal School, Me.	April 1886
Elizabeth J. O'Keefe	1	Kindergarten Training School. Hyannis Normal School	Oct. 1905
Caroline A. Sullivan	1	Kindergarten Training School‡	Nov. 1912
Mary R. O'Keefe	1	Salem Normal School	Nov. 1918
M. Olive McQuillen	1	Lowell Normal School	Jan. 1920
Wyman Open Air School			
Agnes J. McElroy	Principal	Salem Normal School‡	Dec. 1891
Winifred B. Goodwillie	Teacher	Salem Normal School (Summer Courses)‡	Mar. 1906
Eleanor B. Rock	"	Kindergarten Training School‡	April 1914
Marguerite M. Mahoney	"	Lowell Normal School	Nov. 1918
KINDERGARTENS			
Agassiz			
Florence Rice	Kindergartner	Kindergarten Training School. (Radcliffe College, 2 years)	Sept. 1899
Ethel C. French	Asst. "	Kindergarten Training School	Sept. 1915
Boardman			
Annie L. Crane*	Kindergartner	Kindergarten Training School	Dec. 1904
Lillian S. Boothe	Acting Kindergartner	Kindergarten Training School‡	Sept †1912
Jane S. Feeny	Asst. "	Kindergarten Training School	Feb. 1916
Burleigh Street			
Helen N. Hicks	Kindergartner	Kindergarten Training School‡	Sept. 1910
Ruth D. Cobb	Asst. "	Kindergarten Training School. (Simmons College, 2 years. Emerson College, 2 years)	Sept. 1916
Gannett			
Carrie E. Shepherd	Kindergartner	Kindergarten Training School. (Special Courses)	Sept. 1897
Gore			
Selma E. Berthold	Kindergartner	Kindergarten Training School	Sept. 1889
Lillian A. McCarthy	Asst. "	Kindergarten Training School‡	Sept. 1913

*On leave of absence.
‡Attended the Wellington Training School.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Haggerty			
Helen F. Dogherty	Kindergartner	Kindergarten Training School. (Special Courses)°	Sept. 1911
Frances E. Fitzgerald	Asst. "	Kindergarten Training School	Nov. 95
Houghton			
Marion L. Akerman	Kindergartner	Kindergarten Training School	April 1900
Isabel Olney	Asst. "	Kindergarten Training School°	April 1919
Lowell			
Melinda Gates	Kindergartner	Kindergarten Training School (Berlitz School)	Sept. 1889
Merrill			
Caroline A. Leighton	Kindergartner	Kindergarten Training School. (Special Courses)	Sept. 1896
Dora E. Clexton	Asst. "	Kindergarten Training School. (Special Courses)	Apr. 1920
Parker			
Anna D. Francis	Kindergartner	Kindergarten Training School°	Jan. 1906
Peabody			
Irene L. Phelps	Kindergartner	Kindergarten Training School°	April 1904
Mary S. Dempsey	Asst. "	Kindergarten Training School°	Sept. 1912
Shaw			
Harriette E. Ryan	Kindergartner	Kindergarten Training School. (Post-Graduate Courses)°	Sept. 1889
Substitute	Asst. "		
Shepard			
Clara A. Hall	Kindergartner	Kindergarten Training School° (Special Courses)	May 1892
Sleeper			
Mabel S. Adams	Kindergartner	Kindergarten Training School	Oct. 1893
Mary C. Tracey	Asst. "	Kindergarten Training School	Oct. 1919
Taylor			
Mary F. Leland	Kindergartner	Kindergarten Training School (Special Courses)°	Mar. 1896
Helen F. Dogherty	Asst. "	Kindergarten Training School (Special Courses)°	Sept. 1911
Thorndike			
Gertrude L. Bunton	Kindergartner	Kindergarten Training School°	Oct. 1910
Julia Sullivan	Asst. "	Kindergarten Training School	April 1919
Webster			
Jennie S. Clough	Kindergartner	Kindergarten Training School	Sept. 1897
Isabel M. Nash	Asst. "	Kindergarten Training School°	Jan. 1915

°Attended the Wellington Training School

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Wellington			
Gertrude M. Gove	Kindergartner	Kindergarten Training School	May 1893
Substitute	Asst. "		
Willard			
Mary A. McMahon	Kindergartner	Kindergarten Training School°	Oct. 1911
Beatrice Kelley	Asst. "	Kindergarten Training School°	Sept. 1913
SPECIAL SUBJECTS			
Practical Art			
Lucia N. Jennison	Assistant	Worcester Normal School. Boston Normal Art School	Dec. 1893
Music			
John B. Whoriskey	Director	(Special Courses in vocal and instrumental music)	Feb. 1911
Mary F. Ahern	Assistant	(Attended N. E. Conservatory of Music. Boston University Supervisor's Certificate)	May 1919
Josephine C. Wyman	Assistant	Farmington, Me., Normal School	Apr. 1903
Physical Education			
Fanny E. Bickley	Director	Sargent School of Physical Education	Sept. 1918
Mildred Grant	Assistant	Sargent School of Physical Education	Sept. 1919
Vocational Guidance			
Maude A. Deehan	Director	Portland, Me., Normal School. (Special Courses)	Dec. 1893
Manual Training and Pre-Vocational Classes			
Thomas J. Coonan	Putnam	Fitchburg Normal School	Dec. 1919
Frederick Greene	Putnam	Mass. Normal Art School	Dec. 1916
Edward F. McAuliffe	Ellis	Rindge Technical School. (Sloyd Training School, 1 year)	Nov. 1919
Margaret C. Fitzgerald	Russell	Massachusetts Normal Art School°	Dec. 1916
William M. Murphy	Wellington	Mass. Normal Art School	May 1918
John E. Howard	Webster	Sloyd Training School. Law School	Sept. 1911
Gertrude B. Duffy	Webster	Salem Normal School. (Special Courses at Harvard and Simmons Colleges)°	April 1902
Honora F. O'Brien	Thorndike	Gloucester High School. (Attended Boston Normal School)	Sept. 1909
Mary E. Quirk	Roberts	Salem Normal School	Feb. 1910

°Attended the Wellington Training School.

TABULAR VIEW—Continued.

Schools and Teachers	Grade	Where Graduated Highest Institution (Also Other Courses)	Date of Appointment
Cooking			
Helen R. Cook	Teacher	Simmons College	Sept. 1917
Mabel A. Harrington	Teacher	North Adams Normal School. (Special Courses)	April 1920
Home and School Gardens			
Eileen R. Marshall	Director	Framingham Normal School	April 1917
Classes for Stammerers			
Sallie A. Brooks	Teacher	Kindergarten Training School. (Special Courses at Emerson College of Oratory, and at Boston University)‡	Sept. 1913
Special Class at Agassiz Museum			
Margaret Tucker	Teacher	Vassar College. (SpecialCourses)	Sept. 1919
Vision Class			
Julia M. Horgan	"	Salem Normal School‡	Sept. 1908

* On leave of absence.
‡Attended the Wellington Training School.

TABULAR VIEW—Concluded.

Teachers of Sewing	Agnes Gordon, Director
	Anna C. Coleman
	Maude E. Delorme
	Mary J. Smith
	Minnie F. Wilson
	Nettie L. White
Superintendent of Schools	Michael E. Fitzgerald
Assistant Superintendent	Charles M. Herlihy
	James Dugan†
Supervisor of Primary Schools	Katharine L. McElroy
Supervisor of Kindergartens	Alice V. McIntire
Business Agent	Constantine J. Church
Secretary to School Committee	Marie Walsh
Secretary to Superintendent	Elizabeth S. O'Connor
Clerks	Gerald T. Liston
	Helen C. Butler
	Agnes Delehanty
	Catherine Shaughnessy
	Ellen B. Wait
Porter	John H. Lemon
Attendance Officers	Lucian S. Cabot
	William J. Cogan
	Dennis F. Hurley
	William H. Porter
	James H. Shuckrowe
	John J. Sullivan
	Edward J. Walsh

TEACHERS AND OFFICIALS PENSIONED BY THE CITY

Agent	Sanford B. Hubbard
Master Emeritus, Thorndike School	Ruel H. Fletcher
Teachers, High School	Emma A. Scudder
Elementary Schools	Ella R. Avery
" "	Mary P. Blair
" "	Sally N. Chamberlain
" "	Ellen A. Cheney
" "	Josephine M. Doherty
" "	Susan M. Doe
" "	Mary A. Driscoll
" "	Georgianna P. Dutcher
" "	M. Elizabeth Evans
" "	Charlotte A. Ewell
" "	Sarah J. Gunnison
" "	Nellie A. Hutchins
" "	Annie B. Josselyn
" "	Ellen M. Leighton
" "	Evelyn J. Locke
" "	Eliza S. Paddack
" "	Frances E. Pendexter
" "	Emily R. Pitkin
" "	Julia A. Robinson
" "	Abby S. Taylor
" "	Lydia A. Whitcher

TEACHERS AND OFFICIALS PENSIONED FROM THE STATE RETIREMENT FUND

Supervisor of Primary Schools.....Mary A. Lewis
Elementary Schools .....Frances Allen
" " .....Sara A. Bailey
" " .....Fannie P. Browning
" " .....Charlotte M. Chase
" " .....Emma A. Faulkner
" " .....Ella F. Gulliver
" " .....Mary E. G. Harrington
" " .....Ellen J. Hunt
" " .....Flora C. Ingraham
" " .....Ellen J. Plympton
" " .....Eusebia A. Minard
" " .....Louise C. Patterson
" " .....Ida G. Smith
" " .....Elizabeth A. Tower
" " .....Mary E. Towle
" " .....Mary A. Townsend
" " .....Eliza D. Watson
" " .....Susan C. Wyeth
" " .....Grace R. Woodward
" " .....Hortense O. Young

SALARY SCHEDULE

Cambridge High and Latin and Rindge Technical Schools

	Minimum	Increase Per Year	No. of Years	Maximum
Head Master	$3,580	$180	3	$4,120
Masters	2,500	120	6	3,220
Masters, Heads of Departments	3,136	120	4	3,616
Heads of Departments, Men	1,932	120	7	2,772
Heads of Departments, Women	1,644	96	6	2,220
Teachers, Men	1,536	120	7	2,376
Teachers, Women	1,248	96	6	1,824
Teacher—Coach	2,336	120	7	3,176

Elementary Schools

Masters	$2,500	$120	6	$3,220
Masters' Assistants	1,548	84	2	1,716
Principals, 9 rooms or more	1,640	120	3	2,000
Principals, 8 rooms or less	1,588	84	2	1,756
Teachers of 8th grade	1,092	84	6	1,596
Teachers	1,008	84	6	1,512

Kindergartens

Teachers	$984	$84	6	$1,488
Assistant Teachers	948	84	5	1,368

Music and Art

Director	$2,500	$120	6	$3,220
Assistants	1,092	84	6	1,596

Sewing

Director	$1,056	$84	6	$1,560
Teachers	996	84	6	1,500

Physical Education

Director	$1,860	$120	5	$2,460
Assistants	1,248	96	6	1,824

Cooking

Teachers	$1,008	$84	6	$1,512

Prevocational

Teachers, Academic	$1,204	$84	6	$1,708
Teachers, Women, Industrial	1,204	84	6	1,708
" Men, "	1,392	120	4	1,872

Special Classes

Principal (Open Air)	$1,732	$84	2	$1,900
Teachers	1,152	84	6	1,656

Attendance Officers

Each	$1,300	$100	5	$1,800

(Note.—Teachers entering the service of the Cambridge Public Schools for the first time, with outside experience, shall be given credit on the salary schedule by the following rule:

Three years of experience outside of the city will be considered as equivalent to one year of experience in the city, but in no case shall a teacher be credited with more than 5 years of experience.)

In Memoriam

Martha L. Babbitt
Secretary and Librarian
English High Building, High and Latin School
1887–1919
Died November 12, 1919

Peter Roos
Director of Art
Cambridge Public Schools
1896–1919
Died October 8, 1919

REPORT OF SEALER OF WEIGHTS AND MEASURES

Cambridge, Mass., April 10, 1920.

To the Honorable City Council of the City of Cambridge:

In compliance with the City Ordinance, I respectfully submit a report for the department of Weights and Measures for the year ending March 31, 1920.

EXPENDED

Appropriation			$7,950 00
Salaries of Sealers:			
Felix McBride	$1,825 00		
Emery T. Morris	1,400 00		
Hugh H. Healey	1,500 00		
Joseph O'Neil	1,400 00		
Francis J. Sweeney	164 00		
Hugh E. Carton	35 00		
		$6,324 00	
Street Department, for board	$93 75		
Street Department, for shoeing	9 00		
Street Department, for stabling	49 50		
		152 25	
Equipment:			
Caustic-Claflin Co., books	$20 58		
Hobbs & Warren, seals	38 72		
Edwin R. Sage, soap	2 78		
New England Telephone Co., service	30 14		
Harvard Automobile Company, care, repairs, supplies	512 23		
Harvard Co-operative Co., sundries	2 62		
Allen & Doane Co., dies	99 75		
Recorder Pub. Co., advertising	10 29		
Chadwick Boston Lead, lead	40 47		
Dover Stamping Co., measurer	14 70		
Geo. E. Marsterr, Washington, D. C.	55 25		
Bradbury & Ryan, repairs	19 60		
Mass. Highway Com., registration	30 00		
Burton & McCannon, painting	31 12		
J. Frank Facey, printing	1 47		
Laline & Partridge, auto	578 79		
Misses Littlefield, copying	3 58		
Cameron & Knowles, sundries	1 77		
Mass. Speedler Agency, speedlers	9 80		
Lechemere Garage, tube	2 85		
Cambridge Motor Co., hood	4 90		
		$1,511 41	
Amount carried forward		$7,987 66	

Amount brought forward		$7,987 66	
Chadwick & Carr Co., weights	$19 60		
Boston Elevated Railway Co., tickets	39 00		
Nat'l Office Supply Co., books	24 75		
		83 35	
Total expenditures		$8,071 01	
Appropriation		7,950 00	
Amount over-expended		121 01	
Revenue:			
Fees for sealing	$545 48		
Fees for adjusting	87 47		
For one bay horse	40 00		
		$672 95	
Total amount expended			8,071 01
Total amount collected			672 95
Net expense of department			7,398 06

TESTS MADE AT OFFICE FOR YEAR ENDING MARCH 31, 1920

Scales sealed	444	
Scales adjusted	85	
Scales condemned	3	
		532
Weights sealed	152	
Weights adjusted	20	
Weights condemned	1	
		173
Dry measures sealed	50	
Dry measures adjusted	0	
Dry measures condemned	1	
		52
Ice cream measures sealed	7,130	
Ice cream measures adjusted	256	
Ice cream measures condemned	16	
		7,402
Milk jars tested		864
Total number of tests made at office		9,023

TESTS MADE OUTSIDE OF OFFICE FOR YEAR ENDING MARCH 31, 1920

Scales sealed	2,158	
Scales adjusted	412	
Scales condemned	68	
		2,638
Weights sealed	4,194	
Weights adjusted	530	
Weights condemned	35	
		4,759

Dry measures sealed	34	34
Liquid measures sealed	804	
Liquid measures adjusted	42	
Liquid measures condemned	29	
		875
Oil pumps sealed	94	
Oil pumps adjusted	39	
Oil pumps condemned	4	
		137
Yard measures sealed	125	
Yard measures condemned	1	
		126
Platform scales sealed (capacity 5,000 pounds)	77	
Platform scales sealed (less than 5,000 pounds)	512	
Slot weighing scales sealed	125	
25-lb. bags of coal tested	5,480	
Tests made in stores	7,682	
Tests made on street	3,348	
Berry boxes tested	3,720	
		20,944
Total number of tests outside of office		29,513
Total number of tests at office		9,023
Total number of tests made		38,536

Inventory of Property

Standards furnished by the Commonwealth

1 Balance—5 grains to 100 lbs.
1 Set (5) Avoirdupois weights, 50-lb., 25-lb., 10-lb., 5-lb.
1 Set (11) Avoirdupois weights, 4-lb. to 1-16 oz.
1 Kilogramme in case.
1 Steel meter in case.
1 Brass Yard Measure.
1 Set (5) Iron Dry Measures, 1-2 bushel to 1 quart.
1 Set (6) Iron Liquid Measures, 1 gallon to 1 gill.

1 Roll Top Desk.
1 Black Walnut Desk.
5 Chairs.
1 Table.
1 Clothes Press.
1 Scale Cabinet.
2 Benches.
1 Sink.
5 Mats.
1 Set Revised Laws.
1 Set Card Records—Oak Case.
1 Set Card Index—Oak Case.
1 Hektograph.
1 Letter Press.
1 Blotter Bath.

Miscellaneous Books	$200 00
1 Express Wagon	100 00
1 Light Wagon	35 00
1 Pung	23 00
2 Harnesses	70 00
1 Plush Robe	6 00
1 Stable Blanket	2 00
1 Rain Blanket	2 00
1 Woolen Blanket	8 00
1 Halter	75
1 Hitch Weight	50
1 Balance Scale	$88 69
1 Platform Scale, ½ to 2,500 lbs.	75 00
1 Folding Platform Scale, ¼ lb. to 600 lbs.	30 00
1 Balance, 1-10 milligramme to 500 grammes	35 00
1 Balance, 1-50 grain to ½ lb.	15 00
1 Sealer's Balance, 1 grain to 100 lbs.	150 00
2 Leather tool bags	9 50
1 Sealer's Balance, 1 grain to 8 lbs.	50 00
2 Sealer's Trip Scales (not used)	5 00
1 Spring Scale, 1 lb. to 125 lbs.	1 00
2 Sets (19) Avoirdupois Weights, 4 lbs. to ⅛ oz.	10 00
1 Set (9) Troy Weights, 16 oz. to ⅛ oz.	3 00
1 Set (13) Metric Weights, 1 kilo to 1 gramme	5 00
5 Boxes Miscellaneous Weights (not standardized)	10 00
1 Set (3) Iron Weights, 25-lb., 10-lb., 5-lb.	5 00
40 50-lb. Weights	100 00
1 Arch	2 00
3 Glass Graduates	1 00
1 Set (21) Grain Weights, 1,000 gr. to 1-1000 gr.	13 50
1 Set (21) Metric Weights, 50 gram to 1-10	13 50
1 Set (5) Copper Dry Measures, ½ bushel to 1 quart	45 00
1 Set (3) Brass Dry Measures, 1 quart to ½ pint	5 00
2 Sets (14) Copper Liquid Measures, 1 gal. to 1 gill	30 00
1 Yard Measure	1 50
1 Iron Truck	5 00
1 5-gal. Copper Measure	15 00
1 Steel Tape	10 00
1 Pair of Inside Calipers	3 50
1 Set Brands	3 00
1 Plumber's Furnace	5 00
Miscellaneous Tools	50 00
3 Record Books	15 00
2 Ford automobiles	1,074 19
Total	2,331 63

This department has caused four (4) persons to be summoned to court for violations of laws relating to short weight and measure and convictions and fines amounting to $40 have been paid.

Respectfully submitted,

FELIX C. McBRIDE,

Sealer of Weights and Measures.

REPORT OF THE TRUSTEES OF THE CAMBRIDGE PUBLIC LIBRARY

March 31, 1920.

To the Honorable, the City Council of the City of Cambridge.

Gentlemen: The Trustees of the Cambridge Public Library present herewith their sixty-second annual report, which covers the fiscal year ending March 31, 1920.

In the great work of Americanization, for the assimilation of the various nationalities, willing and eager for knowledge of our institutions, as well as their traditions, there is no other medium so valuable or so easy of access as the Public Library.

The groundwork of such knowledge is laid in the elementary schools of the city, and for the public library, as a post-graduate course in its further pursuance, a more liberal appropriation is urged by the Board of Trustees, who find it difficult, with the steadily increasing cost of books and supplies, as well as the inevitably rising scale of salaries, at all times the lowest paid to public employees in comparison with the high standard maintained, to give such service as should be demanded in a city of the importance, both from a literary and commercial standpoint, of Cambridge.

The Central Library will always be a splendid monument to the civic pride of its donor. But it is doubtful if there is another community of its size in which the branch libraries are mere make-shifts, which have long since outgrown their capabilities for good service.

If it is desired to dedicate memorials to those noble sons of Cambridge who made the great sacrifice in the recent war, what more appropriate and lasting tribute could be paid than the erection of up-to-date branch libraries in place of the present obsolete sub-stations.

From whatever source the funds for the establishment and maintenance of suitable auxiliaries to the Central Library may be sought, the matter is one that should be seriously considered by the members of the City Council, as necessity for action will grow more imperative yearly.

The work of the library during the past year is told in detail in the Librarian's report.

JOHN A. BUTLER, *Chairman*
ALBERT E. LYNCH
EDWARD H. REDSTONE
ROBERT W. YOUNG
NELLIE F. CROWLEY
EDWARD P. COLLIER
CHAS. F. J. McCUE.

LIBRARIAN'S ANNUAL REPORT

From April 1, 1919, to March 31, 1920

Gentlemen: I beg to submit herewith the 62nd annual report of the activities of the Cambridge Public Library covering the period from April 1, 1919, to March 31, 1920, inclusive.

CIRCULATION AND GENERAL SURVEY

The new year opens with greater promise and a more insistent call upon the library for service in more directions than ever before. The increase in maintenance, the rising cost in book-making, and the enlarged circulation of the library, have laid additional burdens upon us, and while they interfere in a measure with the public's quest for books, nevertheless with a proper book fund at our disposal, we can assure a larger circulation during the coming year, in spite of all these handicaps. The total number of books circulated by the Cambridge Public Library during the past year is 414,820. This shows a net increase for the year 1919 of 108,785 books, the largest circulation that the library has yet been able to reach, and it is interesting to note, in analyzing this circulation, the gradual change in the public taste for reading and study, and the new problems that now confront the public library.

The recent war has taught us many lessons, not the least of which is the need we have to prepare for citizenship the illiterate immigrant in our midst, and also the preparation for leadership and public thought of the educated native American. This can be done partly by teaching civics through the elementary schools, but as far as teaching leadership is concerned, it will fall principally upon the high schools and colleges, and, also, last but not least, upon the public library. In the high schools at present the teaching of civics consists principally of the study of the Federal Constitution.

Now, inasmuch as it takes a decision of the Supreme Court to determine the meaning of any clause in the constitution, it is no study for the high school, except in a few of its simplest features. Furthermore, a citizen cannot usually vote on an amendment more than once or twice in a lifetime, while he must express his judgment every year through the ballot box on fundamental questions of legislature and of policy. It is training for passing judgment on such questions as these that the schools and the public library ought to provide. What is

this training? It is a training in the study and mastery of economics, sociology, municipal problems, and practical ethics. They include great political questions, like the income tax, the inheritance tax, control of corporations, banking systems, public ownership, labor problems, railroad situation, money standards, and hundreds of other questions like these that rest fundamentally on an economic basis.

Other questions of legislation, upon which our citizens must pass judgment, rest upon a sociological basis, such as woman suffrage, prohibition, housing of the people, wage question, child labor, labor conditions, and employment of women. These subjects are necessary to be informed about, if we wish to think straight on the great political issues of the day. Without an acquaintance with these subjects, many professional and business men are incompetent to form judgments intelligently on these questions. Unless they read up privately, they must adopt blindly the opinions of others in settling these problems, by their votes at the polls. Here is public library service emphasized.

Then there is a large group of municipal problems of which the average citizen has but the vaguest knowledge; questions of public health, education, the housing of the poor, transportation, control of monopolies, personal hygiene, etc. One of the highest duties of citizenship today is to think clearly on these vital questions, which affect the public welfare, not only so that we can vote intelligently upon them, but still more in order that we may help to create an intelligent public opinion that will deal wisely with them. It is such questions as these that are live subjects for study in every American community, and the City of Cambridge is no exception to this condition, as the public library can abundantly testify.

Just as in former years, both in this country and in Great Britain, in the output of books in public libraries, fiction leads in the proportion of 4 to 3 during the year 1919. Non-fiction books now asked for the largely made up of technical books on economics, as cited above, sociology, municipal problems, and practical ethics that heretofore have been dead in pubic libraries. It marks a new epoch in the history and progress of public library service.

COMMUNITY FORUM

Perhaps the most significant part that the library has played during the past year in connection with these "after the war" problems of reconstruction was its connection with the establishment of the

Community Forum. This Forum, as its name implies, was a community center movement designed "to provide a thorough and competent presentation of facts in open discussion about the social, economic and political questions of the day." Though convened in the First Parish Church, Harvard Square, under the auspices of the Church Federation of Old Cambridge, it was a "strictly democratic, free and open endeavor to enlist the churches, libraries, schools, labor organizations of Cambridge, and the community as a whole, in a co-operative concentration upon the same question the same week." The movement interested thinkers and representative public men from all over the country. The library co-operated by issuing each week bibliographies in the form of leaflets on these various questions of the day. Thousands were distributed, and so great was the interest aroused by them that requests poured in from many libraries and scholars and teachers as far away as the Pacific coast, asking to be placed upon our mailing list, and expressing deep appreciation of their value in dealing with these vital problems of the day. The Forum opened on November 23, 1919, and was continued on each Sunday evening thereafter, until the first week in March, 1920. The subjects treated were: The League and Liberalism; Shall the United States of America Resume Responsibilities in the Near East? November 30, The Public and Industrial Situation, December 8; Freedom of Speech, December 14; Is Industrial Democracy Possible? December 21; The Mexican Situation, January 4; The Peace Situation, January 18; The Labor View of the Railroad Situation, January 25; The Plumb Plan on the Railroad Situation, February 1; Colloge Youth and the New Order, February 8; Children and the New Order, February 15; The Traditions of the Fathers, February 22; The Church and the New Order, February 29.

These subjects embody some of the most pressing problems brought out by the late war and the period of reconstruction, in which we now find ourselves. It marks a new era in library work. The Public Library has often been styled "The People's University." One of its principal activities today is to furnish books for reading and study to enlighten the Public Forums of the country, wherein our citizens go to school to each other, to equip themselves properly to become intelligent American citizens. The Forum represents the true American principle in self-education, and the library co-operation would seem to be the right policy to pursue. Seventy-five years ago, Abraham Lincoln was often pictured struggling to get an education, stretched out

on the cabin floor with a borrowed book open between his elbows where the light of the burning log fire could fall upon its pages. To-day the United States votes approximately one-fourth of its annual expenditures to the interests of popular education—more than five hundred millions of dollars. The difference between these two circumstances represents the difference in opportunities for the average American boy or girl today over the day of Abraham Lincoln. It also represents the difference between the single borrowed book and the rich source available in the average public library today, in the matter of self-education.

CATALOGUE DEPARTMENT

The fact that there are approximately 10,000 older books to be re-classified and re-catalogued and about 1,200 volumes not listed in any catalogue, leads me again to call to your attention this unsatisfactory condition and to recommend the appointment of an additional cataloguer, temporary or permanent, to complete the re-classification of the entire library begun in 1895. The advantages of assembling in one catalogue cards representing all the resources of the library cannot be overestimated. It means greater efficiency all along the line in the way of quicker service and greater satisfaction to the public.

The year's record of cataloguing is 2,254 titles, representing 3,870 books, and 10,577 cards added to the public catalogues. For the central library there were 1,560 titles, representing 2,109 books, and 5,767 cards; for the juvenile department, 208 titles, 230 books, 730 catalogue cards; for the branch libraries, 472 titles, representing 1,531 books, and 4,080 catalogue cards; 7,342 cards have been removed from the general public catalogue for the purpose of attracting the younger readers to the juvenile catalogue in the adjoining room, thus relieving congestion at the main catalogue.

The final revision in connection with the music catalogue has been practically completed this year.

The books in the Cambridge room have been examined and re-arranged and the books re-catalogued when it was necessary. The manuscripts, all of which relate to Cambridge, have been arranged by subjects, as far as possible, filed in large envelopes and properly marked.

SUMMARY OF ACCESSIONS FOR 1919-1920

CENTRAL LIBRARY

Added by purchase (new books)	2,195
Added by purchase (replacements)	835
Added by gift	322

BRANCH LIBRARIES

Added by purchase (new books)	1,621	
Added by purchase (replacements)	825	
Added by gift	62	
Total gain		5,860
Withdrawn		3,243
Net gain		2,617
In the library April 1, 1919		116,548
Total in the Library, April 1, 1920		119,165

REGISTRATION

The increased number of registrations at the Central Library and branches amount to 7,087. This is a very creditable showing compared with the increases of former years. It indicates a slow but steady advance. The total number of library cards now in active use throughout the city is 46,481, which is also very encouraging, as it indicates that nearly half the population of the city are active borrowers at the library.

OUTSIDE DELIVERY

The library is glad to acknowledge the acquisition of a Ford delivery truck supplied by funds voted on the request of His Honor, the Mayor, in a supplementary budget. Books are now sent regularly to our branch libraries and supplies are also delivered through this department. Deliveries are also made at the grade schools, throughout the city, at the churches and settlement houses, deposit stations, hospitals and the city home, from time to time, at regular intervals; and the time is not far distant when the citizens of Cambridge, especially those who by circumstance, or because of some physical handicap, are unable to visit the library, may have the library brought to their doors. As the efficiency of the library has been increased, the time is not far distant when we may have a regular house-to-house delivery within the city limits.

MISCELLANEOUS ACTIVITIES

Among the several timely bulletins published during the past year, the library issued a special leaflet on Americanization. It also held in the latter part of January an interesting exhibit of needlework done by the foreign population of Cambridge, a fine specimen of arts and crafts, shown in the reference room of the public library, under the auspices of the neighborhood house, of which Mrs. Whitman is chairman. On Lincoln Day messages of patriotism selected from the writings and sayings of Abraham Lincoln were distributed generously in the public schools of Cambridge by the library.

On Friday, June 6, 1919, Dr. John A. Rockwell, of Cambridge, related his experiences during the war at a base hospital in France to a large and distinguished audience in the assembly hall. During and after the lecture there was a fine display of French war posters that attracted much attention.

Throughout the year the music room has been in constant demand from time to time. The kindergarten teachers of the city have used it regularly each month for their meetings; French classes from the High School, commercial classes from the Evening High, and dramatic classes from the Cambridge High and Latin schools, all have made use of it on alternate days throughout the year.

Five thousand copies of the Constitution of the United States were distributed to the public and the members of the American Legion on the occasion of the public reception, parade and dinner tendered them October 12, 1919, by the citizens of Cambridge.

The library also co-operated with Harvard University and the City of Boston in furnishing the program for the celebration of Patriots' Day.

WORK WITH HIGH SCHOOLS

Instruction of high school pupils in the use of the library was first begun about two years ago, and was carried on more regularly this year, since there were no long interruptions due to epidemic or coal shortage, as has been the case in the past.

The Freshman class of the Cambridge High and Latin schools came for a series of three lessons on the following topics: (1) The leading Dictionaries and Encyclopedias; (2) the Card Catalogue; (3) some Biographical Dictionaries, with practice in using the card catalogue and the books discussed in the previous lessons. Six hundred

and sixty-eight pupils came for the first lesson; six hundred and twenty-four for the second; and five hundred and thirty-one for the third. They came in divisions of between twenty and thirty in one of the periods assigned for a recitation in English. The results of the practice work were good for the short time allowed. Two hundred and seventy found answers for the three questions assigned them (ninety-six of these answered extra questions); one hundred and sixty-three found answers for two questions; only twelve failed to find any.

The lessons which are being given to the Sophomore class this year are on (1) Magazine Indexes, (2) Year-books, with practice in the use of these. Five hundred and five pupils came for the first lesson, and four hundred and forty-nine came for the second lesson, just before the end of the school year.

The work with the Rindge Technical School has been practically the same with the Senior and Freshman classes. After three talks on the use of the library, there were assigned to the Senior class topics, on one of which each student looked up and listed ten library references. Six hundred and eighty pupils have been over from the Rindge School thus far.

It is felt that the work has paid in increased use of the library, and greater interest shown by the high school students. Our object is to have the boys and girls feel at home in the library and make them realize the important part it may play in the development of their intellectual life, both while they are in school and after school days are over. These results, like those of other branches of library work, are hard to measure, but the attitude of pupils who now visit the library would indicate that we are moving in the right direction.

GENERAL REFERENCE WORK

	Attendance	*Questions*
April 12–30	1,291	429
May	1,017	526
June	812	209
July	1,005	241
August	1,710	297
September	1,933	420
October	2,246	709
November	2,303	565
December	2,291	579
January	2,925	859
February	2,415	691
March	2,664	730
Total	22,612	6,255

JUVENILE DEPARTMENT

Story Hour

The library has been peculiarly favored again this year by securing the services of the kindergarten teachers for the children's story hour through the generous co-operation of Miss Alice McIntire, the head of that department of the city schools. The stories told were mainly about knights, Norse ballads, folk lore, fairy tales, poems by Kipling, Robert Louis Stevenson, stories of Peter Pan, of St. Christopher, animal stories, etc. During the Christmas season, Mrs Cotter sang Christmas carols with the story-telling, while Miss Henrietta Ryan told the Gospel story. The other teachers who assisted from November, 1919, to April, 1920, on alternate Saturdays, were the Misses Leland, Gates, Booth, Kelley, McCarthy, Cobb, Feeney, Gove and McIntire.

Questions answered in Children's Room from August, 1919.....	509
Readers in Children's Room from August, 1919.....	8,660

A Children's "Book Week" exhibit was held in the Delivery Room of the library from November 12 to November 22.

BRANCHES IN GENERAL

In business, progress depends to a great degree upon the new ideas adopted that help to increase production. Plans and methods that decrease labor turn-over, cut costs, insure better service to customers—these are the things that make for greater executive results and increase efficiency. So, also, in library extension work it is important that the distribution of books through the branch libraries and deposit stations throughout the city should be systematized and standardized, and its development and growth should be orderly and efficient.

In Cambridge there is no more useful feature of the Public Library than these local stations distributing books in the outlying sections of the city, but our appropriation is inadequate to enable them to do all that they could and should do to accommodate the public with suitable living quarters and proper book facilities. In order, however, to avoid duplication of effort and to establish uniformity of privilege to borrowers in every section of the city, we have inaugurated a series of general staff monthly meetings throughout the year at the Central Library, for the branch librarians especially. These meetings have proved to be very profitable and have brought the service as a whole to as high a condition of efficiency as is possible under

existing conditions. Meanwhile, hundreds of new Carnegie library buildings are being increasingly appreciated all over the country and are much admired by library people as well as by the public.

CONCLUSION

In the new era of library service that is just dawning, the chief characteristic of all education is specialization. The intensive application of men to single branches of human endeavor, the division of business and the professions into departments, demanding the trained intelligence of specialists, the invasion of all fields of work by women, and the expansion of technical and professional schools present a new situation for the librarian that must be adequately met. Twenty-five years ago the business college was an experiment; today it has become such a necessity that the correspondence school has also been created for those who cannot attend the regular classes. The school of foreign languages has risen to keep up with the rapidly extending fields of commerce. Law schools and medical schools have multiplied. Arts and crafts, conservatories of music, schools of oratory, furnish practical opportunities for students to fit themselves for their special work in life. The essence of all this development and specializing in education is the demand for the practical in life. There are today thousands of would-be students who cannot have the luxury of a college course, yet must fit themselves for their adopted professions by at least a short course in the fundamentals of their professions. For such, the Public library and the great number of special schools offer the sole opportunity. But the library no longer trails the schools, it points the way.

SUMMARY OF REPORT OF THE TREASURER OF THE BOARD OF TRUSTEES

March 26, 1920

Citizen's Subscription Fund

March 31, 1919		March 26, 1920	
Balance in bank	$123 16	Balance in bank	$285 17
Balance in bonds	5,500 00	Balance in bonds	5,500 00
Receipts	296 49	Expenditures	134 48
	5,919 65		5,919 65

Cummings Fund

March 31, 1919		March 26, 1920	
Balance in bank	$54 36	Balance in bank	$48 58
Balance in bonds	2,000 00	Balance in bonds	2,000 00
Receipts	35 00	Expenditures	40 78
	2,089 36		2,089 36

Fay Fund

March 31, 1919		March 26, 1920	
Balance in bank	$54 42	Balance in bank	$40 03
Balance in bonds	952 03	Balance in bonds	952 03
Receipts	42 50	Expenditures	56 89
	1,048 95		1,048 95

William Penn Harding Fund

March 31, 1919		March 26, 1920	
Balance in bank	$63 43	Balance in bank	$87 92
Balance in bonds	1,000 00	Balance in bonds	1,000 00
Receipts	61 12	Expenditures	36 63
	1,124 55		1,124 55

William E. Saunders Fund

March 31, 1919		March 26, 1920	
Balance in bank	$805 21	Balance in bank	$187 24
Balance in bonds	7,000 00	Balance in bonds	7,000 00
Balance in savings deposit	639 20	Balance in savings deposit	668 27
Receipts	274 07	Expenditures	862 97
	8,718 48		8,718 48

James A. Woolson Fund

March 31, 1919		March 26, 1920	
Balance in bank	$360 08	Balance in bank	$301 71
Balance in bonds	5,000 00	Balance in bonds	5,000 00
Receipts	175 00	Expenditures	233 37
	5,535 08		5,535 08

Edward H. Whorf Fund

March 31, 1919		March 26, 1920	
Balance in bank	604 52	Balance in bank	$691 29
Balance in bonds	3,000 00	Balance in bonds	3,000 00
Receipts	120 00	Expenditures	$33 23
	3,724 00		3,724 52

Mehitable C. C. Wilson Fund

March 31, 1919		March 26, 1920	
Balance in bank	$668 31	Balance in bank	$698 21
Receipts	40 52	Expenditures	10 62
	708 83		708 83

Abigail W. Howe Fund

March 31, 1919		March 26, 1920	
Balance in bank	$123 34	Balance in bank	$176 82
Balance in bonds	3,000 00	Balance in bonds	3,000 00
Receipts	120 00	Expenditures	66 52
	3,243 34		3,243 34

ACCOUNT OF FINES, SALE OLD PAPER STOCK, ETC.

1919					
April 1	To cash from fines.	$81 98			
May	To cash from fines.	100 27			
June	To cash from fines.	141 70			
		323 95	July 1	By cash paid City Treasurer	$323 95
July	To cash from fines.	102 08			
Aug.	To cash from fines.	128 81			
Sept.	To cash from fines.	116 44			
		347 33	Oct. 1	By cash paid City Treasurer	347 33
Oct.	To cash from fines.	31 84			
Nov.	To cash from fines.	161 00			
Dec.	To cash from fines.	121 60			
		314 44	Jan. 2	By cash paid City Treasurer	314 44
1920					
Jan.	To cash from fines.	227 00			
Feb.	To cash from fines.	140 38			
March	To cash from fines.	179 00			
		546 38	March 27	By cash paid City Treasurer	546 38

CITY APPROPRIATION

CENTRAL LIBRARY AND BRANCHES

SALARIES

Appropriation	$26,188 00
Increased by blanket order	499 13
Total	26,687 13

GENERAL EXPENSES

Appropriation	15,315 00
Increased by blanket order	468 82
Total	15,783 82

EXPENDITURES

Printing and binding	$1,993 28
Postage and stationery	92 35
Advertising and posting	10 04
Transportation of persons	50 00
Cartage and freight	36 35
Hire of teams and auto trucks	375 84
Light	947 82
Rent	756 00
Insurance	1,004 84
Communication	239 40
Automobile repairs	70 58
Fees	10 00
Boiler inspection	10 00
General plant repairs	242 10
Electrical equipment	20 82
Motor vehicle	825 00
Furniture and fittings	357 81
Office supplies	150 12
Food and ice	59 21
Fuel	1,511 91
Library supplies (books, etc.)	6,789 04
Laundry, cleaning and toilet	19 98
Automobile supplies	14 36
General plant supplies	196 97
Total	15,783 82

APPENDIX

GIFTS OF BOOKS

	Volumes
American Hellenic Society, Columbia University, N. Y.	1
American-Irish Historical Society, Boston and New York	1
Alden, John B., Neshanic, N. J.	1
American Jewish Committee, New York	1
Armour, J. Ogden	1
Association of Life Insurance Presidents, New York	1
Bettens, Edward Detraz, New York	1
Boston, Mass.	2
Broughton, Mrs. Martha Arnold, Brooklyn, N. Y.	1
Brown, John F.	3
Business Code Co., New York	1
Butler, Rev. John A.	2
Boston Transit Commission, Boston	1
Cambridge Neighborhood House	1
Cambridge Tribune	1
Carnegie Endowment for International Peace, Washington, D. C.	1
Carnegie Institute, Pittsburgh, Pa.	1
Chafee, Zechariah, Cambridge	1
Chapman, John Jay	1
Cleary, James, Cambridge	1
Cokinos, Adam, Washington, D. C.	1
Colonial Dames of America in the State of Virginia, Richmond, Va.	1
Constable and Company, Ltd., London	1
Cummings, Mrs. John Haynes, Boston	1
Cummings, Thomas Harrison	2
Dallinger, Hon. Frederick W., M. C., Washington, D. C.	2
Davis, Webster W., New York	1
Doran, George H., Co., New York	1
Farnsworth, Edward Clarence, Portland, Me.	1
First Church of Christ Scientist, Cambridge	1
General Education Board, New York	3
Gozzaldi, Mrs. Silvio M. de, Cambridge	2
Houghton, Alberta M., for the Henry Oscar Houghton Memorial Collection	8
Iowa, Historical Dept. of, Des Moines, Iowa	1
Italian Bureau of Public Information, New York	1
Kipp, Frederic E., New York	2
Korean National Association, San Francisco, Cal.	2
Lally, Patrick J., Cambridge	1
Lane, Charles Alva, Alliance, O.	1
Lane, William C., Cambridge	1
Langer, William L., Cambridge	1
League to Enforce Peace, New York	1
Lepper, George H., Pittsburg, Pa.	1
Library Bureau, Boston	1
Lindley, John Marshall, Cambridge	1
Lithuanian National Council, U. S. A.	1
Lovatelli, M., Washington, D. C.	1
Marchetti, Levio, Rome, Italy	1
Markham, Edward Russell, Cambridge	2
Mansfield, Mrs J. W.	2
Manufacturers' Aircraft Association, New York	1
Massachusetts, Commonwealth of	15

Metropolitan Park Commissioners, Boston	5
Meyer, Henry Hixon, Cambridge	5
Miller, Mildred A., Cambridge	1
Monroe, Mrs Edward S., Cambridge	1
National Industrial Conference Board, Boston	1
National Security League, Inc., New York	1
New Orleans Association of Commerce, New Orleans, La.	1
Nolen, John, Cambridge	1
Old Colony Trust Company, Boston	2
Pani, Alberto J.	1
Philippine Press Bureau, Washington, D. C.	1
Quigley, Alice, Cambridge	1
Remington Typewriter Company, New York	1
Salter, William M., Cambridge	1
Saunders, Mary E., Cambridge	1
Saward, Frederick W., New York	1
Scituate Historical Society, Scituate, Mass.	1
Shumaker, Ellsworth E., Cambridge	6
Smithsonian Institution, Washington, D. C.	10
Southern Pine Association, New Orleans, La.	1
Stone, James Edward	2
Thurston, Charles H., Cambridge	10
United States Bureau of Education	14
United States Civil Service Commission	1
United States Council of National Defence	1
United States Department of Agriculture	1
United States Department of Commerce	7
United States Department of Labor	2
United States Interstate Commerce Commission	1
United States Library of Congress	5
United States Patent Office	11
United States Provost-Marshal General's Bureau	1
United States Superintendent of Documents	2
United States War Department	19
Universal Brotherhood and Theosophical Society, Boston	2
Warren, S. D., Co., Boston	1
Weldon, Charles W. T., Cambridge	1
White, Robert, Cambridge	1
Willard, Susanne, Cambridge	1
Wright, George G., Cambridge	2
Winlock, Isabella L., Cambridge	1

Library reports and bulletins, school reports, periodicals and miscellaneous pamphlets are not included in the above list.

CAMBRIDGE PUBLIC LIBRARY

1919-20

TRUSTEES

CHARLES F. J. McCUE (Of the School Committee)	Term expires January, 1921
EDWARD P. COLLIER	Term expires January, 1921
ROBERT W. YOUNG	Term expires January, 1921
ALBERT E. LYNCH	Term expires January, 1922
EDWARD H. REDSTONE	Term expires January, 1922
JOHN A. BUTLER	Term expires January, 1923
NELLIE F. CROWLEY	Term expired January, 1920

PRESIDENT
Rev. John A. Butler

SECRETARY
Nellie F. Crowley

TREASURER
Albert E. Lynch

LIBRARIAN
Thomas Harrison Cummings

CENTRAL LIBRARY

Broadway and Trowbridge St.

The central library is open daily, except holidays, from 9 A. M. to 9 P. M.; the children's room, from 9 A. M. to 6 P. M. On Sundays the central library is open to readers only, but not for home circulation, from 2 to 9 P. M.; the children's room from 2 to 6 P. M. From June 15 to September 15 the central library and children's room are closed on Sundays.

BRANCH LIBRARIES

Open Week Days Only

EAST CAMBRIDGE BRANCH, Fourth Street,
Open from 9 A. M. to 9 P. M.

NORTH CAMBRIDGE BRANCH, 2101 Mass. Ave.
Open from 9 A. M. to 9 P. M.

CAMBRIDGEPORT BRANCH, 744 Mass. Ave., cor. Pleasant St.
Open from 9 A. M. to 9 P. M.

CAMBRIDGE FIELD BRANCH, the Shelter, Cambridge Field
Open from 2 P. M. to 9 P. M. Saturdays, 9 A. M. to 9 P. M.

MT. AUBURN BRANCH, Haggerty Schoolhouse, Cushing St.
Open Mondays and Wednesdays, 2-9 P. M. Saturdays, 1-9 P. M.

REPORT OF THE CHIEF OF POLICE

APRIL 1, 1919, TO MARCH 31, 1920

Cambridge, Mass., April 15th, 1920.

To His Honor the Mayor and the Honorable City Council of the City of Cambridge,

Gentlemen:—In compliance with the City Ordinance I herewith submit the annual report of the doings of the Police Department for the year ending March 31st, 1920.

Total number of arrests	3,822
Number of arrests last year	4,928
A decrease of	1,106

OFFENCES FOR WHICH ARRESTS HAVE BEEN MADE

Crimes against persons:

Assault, felonious	23
Assault and Battery	211
Assault on officer	7
Manslaughter	1
Murder	1
Rape	4
Robbery	6
Threats and Intimidation	18
Total	271

Crimes against property:

Breaking and Entering	157
Evading car fares	19
Larceny in building	1
Larceny	320
Larceny from person	2
Malicious mischief	49
Receiving stolen property	52
Trespass	35
Unlawful appropriation of autos	57
Conveying leased property	11
Attempt to Break and Enter	2
Attempt to commit larceny.	6
Total	711

Crimes against public order, etc.:

Abortion	1
Accosting opposite sex	2
Adultery	9
Abandonment	8
Acting as broker, without a license	1
Bastardy	49
Bigamy	2
City Ordinance, violations	138
Common drunkard	2
Carrying concealed weapons	28
Contempt of court	6
Conducting junk shop without a license	24
Counterfeiting	1
Conspiracy	18
Cruelty to animals	3
Disturbing the peace	127
Keeping unlicensed dog	3
Deserters	5
Drunkenness	871
Escaped prisoners	10
False alarm of fire	7
Forgery	5
Federal Laws, violations	4
Fornication	11
Fugitives from justice	2
Gaming, and present at	231
Idle and Disorderly	4
Illegal transportation	1
Indecent exposure	6
Insane	33
Keeping house of ill fame	1
Lewdness	20
Liquor laws, violation	36
Lord's Day, violation	5

Crimes against public order, etc.—Continued

Loitering	11	Sodomy	1
Motor vehicle laws, violation	713	Surrender by bail	1
Non-support	170	Stubbornness	65
Neglected children	21	Truants	15
Possession of obscene pictures	1	Tramps	2
Peddling without a license.	1	Unnatural act	1
Perjury	2	Unlawful measures, use of	2
Poligamy	2	Vagabond	5
Profanity	2	Vagrants	5
Promoting a lottery	3	Violation of milk laws	14
Refusing to aid an officer	1	" " pure food laws	1
Runaways	10	" " election laws	1
Rescuing a prisoner, attempt	6	" " labor laws	3
Suspicious persons	22	" " Park rules	1
		" " probation	74
		" " parol	3
		" " fire laws	1
		Total	2,840

Grand total of	3,822	Females	177
Males	3,645	Non-residents	873

NATIVITY OF PERSONS ARRESTED

Albania	1	Germany	8	Portugal	53
Armenia	8	Greece	71	Russia	246
Austria	4	Holland	1	Roumania	6
Azores	3	Ireland	160	Scotland	11
Belgium	2	Italy	147	Sweden	22
Canada	112	Japan	3	Switzerland	1
China	1	Lithuania	34	Turkey	10
Denmark	1	New Foundland.	14	United States	2,746
England	32	Norway	9	Unknown	3
		Poland	70	West Indies	43

OCCUPATION OF PERSONS ARRESTED

Agent	26	Domestic	27	Laundress	4
Autos	28	Electrician	22	Lawyer	2
Baker	15	Engineer	13	Lineman	1
Barber	14	Expressman	14	Lumberman	2
Blacksmith	25	Farmer	11	Machinest	118
Bookkeeper	6	Fireman	16	Musician	2
Bricklayer	2	Foreman	9	Manager	10
Broker	1	Fruit dealer	9	Manufacturer	10
Butcher	5	Gardener	8	Mechanic	106
Candymaker	25	Grocer	15	Mason's tender	2
Caretaker	1	Helper	19	Merchant	72
Carpenter	52	Housekeeper	119	Milk dealer	14
Chauffeur	308	Inspector	7	Mill hand	3
Chef	1	Investigator	1	Motorman	5
Chemist	1	Iron worker	38	Moulder	6
Clerk	136	Janitor	11	None	126
Conductor	20	Jeweler	5	Nurse	3
Contractor	6	Junk dealer	31	Office boy	23
Cook	15	Laborers	1,199	Painter	59
Core maker	2	Lather	2	Photographer	3

OCCUPATION OF PERSONS ARRESTED—Concluded

Physician	11	Sailor	41	Tailor	14
Plumber	16	Salesman	91	Teacher	13
Printer	45	Student	265	Teamster	178
Polisher	4	Seamstress	2	Telephone operator	1
Plasterer	2	Shipper	22	Tinsmith	14
Police officer	1	Shoemaker	9	Tire maker	5
Porter	14	Soldier	24	Trackman	1
Railroad man	9	Stenographer	7	Undertaker	1
Roofers	7	Steamfitter	24	Waiter	21
Rubber worker	46	Storekeeper	83		

MISCELLANEOUS BUSINESS

Accidents	1,303	Defects in streets and sidewalks	1,777
Buildings found open	442	Disturbances suppressed	154
Cases investigated	7,446	Dogs killed	43
Dangerous buildings	18	Fires extinguished without alarms	169
Dead bodies found	33	Intoxicated persons helped home	2
Defective catch-basins	124	Lost children restored	586
" drains	9	Sick and injured persons assisted	651
" trees	23	Stray teams put up	78
" fire alarms	49	Street obstructions removed	63
" gas pipes	21	Persons reported missing	60
" water pipes	403	Persons restored	22
" lamps	5,129		
" wires	147		
" signs	3		

EXPENDITURES

"A"	**Salaries**		$281,518 49
"B"	**Services other than personal:**		
1	Printing and binding	$21 61	
4	Transportation of persons	475 12	
6	Hire of teams and auto trucks	77 18	
8	Light and power	1,164 55	
13	Communications	603 63	
14	Motor vehicle repairs	754 70	
22	Medicine	1 00	
35	Fees, service of venires, etc.	11 76	
37	Photographic and blueprinting	13 38	
39	General plant	62 75	
	Total		$3,285 68
"C"	**Equipment:**		
4	Motor vehicles	$1,882 62	
7	Furniture and fittings	25 73	
9	Office	84 34	
17	General plant	417 92	
18	Regalia	280 77	
	Total		2,691 38

"D" Supplies:

1	Office	$727 50	
2	Food and ice	46 88	
5	Medical	75	
11	Motor vehicle	1,249 07	
	Total		2,024 20

PROPERTY IN USE BY THE DEPARTMENT

3	Motor ambulances
1	Chief's auto
4	Book-cases
1	Bicycle
33	Blankets
1	Bertillon book
10	Beds and bedding
1	Camera and stand
4	Card indexes
1	Copy press
49	Chairs
10	Clocks
21	Cuspidors
18	Roll top desks
6	Directories
190	Diaries
4	Electric desk lamps
3	Grappling irons
6	Galvanized cans
2	Straight jackets
5	Ice water tanks
15	Ink stands
1	Letter scale
10	Lanterns
3	Medicine cabinets
1	Couch
10	Mirrors
5	Maps
1	Motorcycle
1	Private telephone system
8	Pair handcuffs
1	Pair leg irons
7	Pails
190	Police belts
193	Badges
200	Billies
2	Pulmotors
195	Police box keys
195	Fire alarm keys
3	Rugs
180	Revolvers
200	Rules and regulations
2	Settees
3	Safes
30	Sheets
6	Stretchers
7	Sets of Law books
4	Sets of First Aid charts
2	Wardrobes
13	Waste baskets
200	ft. of Fire ropes
	Trays and graduates

CHANGES IN THE FORCE DURING THE YEAR

1	Lieutenant promoted to Captain
4	Sergeants promoted to Lieutenants
5	Patrolmen promoted to Sergeants
12	Reserve officers appointed Patrolmen
15	Reserve officers appointed
1	Patrolman and two reserve officers resigned
1	Patrolman died

IN MEMORIAM

Benjamin F. Higgins — Born June 25, 1846

Appointed — January 22, 1879

Died — December 19, 1919

RECOMMENDATIONS

I would respectfully recommend that an appropriation be made for the purchase of a new ambulance to take the place of the Ford machine that has been in service at Station Two for over three years.

As there appears to be no immediate prospects of remodelling the building occupied by Station Two and Police Headquarters, I would recommend that the old unsanitary brick cells in that building be torn out and steel cages substituted.

Respectfully submitted,

JOHN J. McBRIDE,

Chief of Police.

REPORT OF THE TRUSTEES OF THE BRIDGE CHARITABLE FUND

The following is the forty-second annual report relative to this fund, as prepared by the City Treasurer:

Founded by the late Levi Bridge of Cambridge, in his lifetime, by a deed of trust dated August 12, 1875, and upon his death (April 15, 1876), the amount of said fund came into the hands of the city. In October, 1877, Mr. Samuel F. Bridge, a relative of the founder, gave a sum sufficient to double the amount. When the fund reached two thousand dollars, one-third of the income was to be added to the principal and two-thirds of the income was to be paid over annually to the Overseers of the Poor, to be expended for the deserving poor of Cambridge. The trustees consist of the Mayor, the President of the City Council and the Chairman of the Board of Overseers of the Poor.

The City Treasurer is custodian of the fund.

Amount of fund March 31, 1919		$2,758 69
Interest March 31, 1920	$111 42	
Two-thirds income paid to Overseers of Poor	74 28	
One-third income paid to the Fund		37 14
Balance deposited in Central Trust Co., March 31, 1920		$2,795 83

Two-thirds of the income, amounting to $74.28, was paid to the Overseers of the Poor, and the balance, $37.14, was added to the principal, leaving a balance of $2,795.83 in the hands of the City Treasurer. Said sum is deposited in the Central Trust Company and bears interest at the rate of four per cent per annum.

HENRY F. LEHAN,
City Treasurer.

As all the essential facts in relation to this fund are recited in the report of the City Treasurer, the Trustees desire only to repeat the suggestion embodied in previous reports, that other charitable persons may be disposed to add their contributions to the fund.

EDWARD W. QUINN,
JAMES T. BARRETT,
JOHN R. McCOOL,
Trustees of the Bridge Charitable Fund.

REPORT OF THE CITY PHYSICIAN

To His Honor the Mayor, and the Honorable City Council of the City of Cambridge:

Gentlemen:

The report of the City Physician for the twelve months ending March, 1920, is hereby rendered.

CITY HOME

Number of visits	229
Number of persons attended there	159
Number of deaths	29
Number of persons admitted to hospital wards	81
Cost of medicines	$533.23
Cost of surgical appliances	
Cost of medical assistance	

OUTSIDE AID

Number of persons attended for the Overseers of the Poor	899
Number of visits to the same	1,215
Number of persons sent to outside hospitals for treatment	3
Number of outside deaths	4
Number of outside births	6
Cost of medicines	$725.42
Cost of surgical appliances	
Cost of medical assistance	90.00
	$815.42

DEPARTMENTAL

Number of persons attended at police stations	24
Number of visits to the same	24
Number of persons examined for the law department	20
Number of visits to the same	24
Number of employees examined for injuries or sickness, to wit:	
Police department	4
Fire department	2
Number of visits to the same	6
Number of vaccinations for the school committee	440
Number of visits to the same	440
Number of call men examined for promotion	2
Number of visits to the same	2
Number of employees examined for retirement	3
Number of visits to the same	3
Total number of persons having received professional care	1,553
Total number of visits to the same	1,943

I wish to thank all the officials connected with the department for their kind and courteous treatment, and material help.

Respectfully submitted,

WILLIAM G. BROUSSEAU, M.D.,

City Physician.

REPORT OF THE TRUSTEES OF THE SAUNDERS TEMPERANCE FUND

671 Massachusetts Avenue,
Cambridge, Massachusetts,
April 24, 1920.

Gentlemen:

I wish at this time to submit to you this statement of the work which I have been doing as City Missionary for your approval. I have attended the Third District Court on an average of twice a week, and offered my services to the officers of said Court pertaining to my work. From time to time I have attended to matters which they have called to my attention. I have also been called upon to give assistance to some unfortunates in this City, which I have done, namely providing board and room, and also sometimes food for people who were in need. During Christmas week I received quite a few names from citizens in this City of people in need, and they were provided with Christmas dinners through the courtesy of the Cambridge Lodge of Elks. I gave these names in to the committee in charge, and they very graciously saw to it that Christmas dinners were sent out to these people, at the same time that they were distributing Christmas dinners.

Respectfully submitted,
CHARLES F. HURLEY,
City Missionary.

REPORT OF THE CHIEF OF THE FIRE DEPARTMENT

FOR THE YEAR ENDING MARCH 31, 1920

To the Honorable, The Mayor and the City Council of the City of Cambridge, Massachusetts,

Gentlemen:—I have the honor to present herewith, in compliance with the requirements of the City Charter, the Annual Report of the Cambridge Fire Department.

A record of the Department will be found in this report, showing the number of alarms to which response has been made, with the losses resulting therefrom; also the number and kind of improvements made during the year 1919–1920, together with recommendations for improvements that are necessary at the present time in order that proper fire protection may be given the residents and property owners of the City.

During the fiscal year 1919–1920 the Department has responded to 743 alarms; 566 of which were actual fires, being 16 more than the preceding fiscal year.

The total losses, together with the insurance and the amount of insurance paid, were as follows:

	Losses	Insurance	Insurance Paid
On Buildings	$171,731 49	$7,710,657 00	$164,674 64
On Contents	297,237 59	3,404,131 00	280,418 66

During the last year the following improvements have been made: One American LaFrance Triple Combination Pumping Engine. Chemical and Hose Wagon was purchased and placed in Engine No. 6 House to take the place of the horse drawn apparatus, and a Combination Chemical and Hose Wagon, motor driven, was purchased and placed in Engine No. 2 House to take the place of the horse drawn hose wagon.

GENERAL EXPENSES

Salaries	General Expense	Pensions
$228,223 09	$43,246 02	$24,784.95

RECOMMENDATIONS

That a lot of land be purchased and a new building erected for the Engine and Ladder Companies now located in the Brattle Square Building, as this building is not fit for fire department purposes.

I also renew my recommendation that a suitable building for the repairing and storage of spare apparatus be built on City property adjoining the Ladder House on Portland Street, as the present repair shop located in Engine No. 5 House in Inman Square is too small to carry on the work required.

TWO PLATOON SYSTEM

On April 1, 1919, the Department was placed on a Two Platoon basis and the permanent force increased from one hundred and twenty-two (122) members to one hundred and sixty (160), making an addition of thirty-eight (38) new members.

CONCLUSION

To His Honor the Mayor and City Council, I desire to tender my sincere thanks for their hearty co-operation during the past year.

I also desire to thank the Officers and Members of the Department for the prompt and efficient manner in which they have performed the arduous duties of their exceptionally hazardous calling. Although there has been more than the usual number of minor injuries, I am pleased to be able to report that there has been no accident causing the death of any member of the Department during the year.

I also desire to thank the Fire Alarm and Police Departments for their very welcome and thorough help given this Department during the year.

Respectfully submitted,

JAMES M. CASEY,

Chief of Fire Department.

ROSTER OF FIRE DEPARTMENT

Badge	Name	Rank	Residence
	James M. Casey	Chief	353 Huron Avenue
	Cutler L. Vose	Deputy Chief	452 Broadway

CHIEF'S CLERK

Badge	Name	Rank	Residence
100	James J. Clifford	Lieutenant	2 Ellsworth Avenue

SUPERINTENDENT OF REPAIRS

Badge	Name	Rank	Residence
18	William J. Reilly	Lieutenant	40 Maple Avenue
	Joseph P. Flynn	Mechanician	71 Inman Street

CHIEF'S DRIVERS

Badge	Name	Rank	Residence
48	George A. Regan	Private	84 Pemberton Street
22	George H. Friel	Private	31 Portsmouth Street

ENGINE CO. NO. 1

Second size Amoskeag engine drawn by three horses, capacity 900 gallons per minute; has been in service since 1883. New boiler, 1912. Hose wagon drawn by two horses, with 800 feet of hose and other equipment.

Badge	Name	Rank	Residence
5	Daniel E. Shea	Captain	65 Putnam Avenue
131	Richard J. Doyle	Lieutenant	104 Fayerweather St.
63	Thomas H. McCourt	Engineman	59 Rindge Avenue
4	Hiram W. Hooker	Asst. Engineman	51 Fayette Street
118	William H. Acford	Private	14 Carlisle Street
75	Leo A. Diehl	Private	9 Garden Street
121	John J. Flavin	Private	108 Mt. Auburn Street
127	William A. Witham	Private	57 Tremont Street
47	Francis R. Jefferson	Private	136 Mt. Auburn Street
138	Thomas F. Sullivan	Private	22 Meacham Road
139	Patrick F. Burns	Private	197 Harvard Street
140	George A. Ryan	Private	79 Putnam Ave.

ENGINE CO. NO. 2

First size Amoskeag Engine, tractor drawn; capacity 900 gallons a minute; has been in service since 1891. New boiler, 1917. Combination Hose and Chemical Auto. Built by American LaFrance Fire Engine Co. Put in service October, 1919.

Badge	Name	Rank	Residence
62	John H. Dardis	Captain	81 Prospect Street
77	Dennis R. Sullivan	Lieutenant	210 Columbia Street
2	Charles A. Cairns	Engineman	384 Mass. Avenue
6	Thomas H. Drummond	Asst. Engineman	270 Green Street
84	Thomas H. Anderson	Private	15 Watson Street
78	Charles A. Olsen	Private	384 Mass. Avenue
41	William J. Connors	Private	384 Mass. Avenue
58	Patrick J. Hayes	Private	24 Columbia Street
15	Thomas L. Galvin	Private	15 Elm Street
	James M. Collins	Private	29 Putnam Avenue
93	John J. Murphy, 2d	Private	195 River Street
155	David J. Ryan	Private	254 Franklin Street

ENGINE CO. NO. 3

Second size Amoskeag engine, tractor drawn; capacity 700 gallons a minute; has been in service since 1872. New boiler, 1918. Hose wagon drawn by two horses, with 800 feet of hose and all other necessary equipment.

Badge	Name	Rank	Residence
27	Frank M. McGrath	Captain	146 Spring Street
30	William F. Newman	Lieutenant	29 Rindgefield Street
12	William L. McCusker	Engineman	40 Williams Street
19	Cornelius O'Connell	Asst. Engineman	203 Cambridge Street
115	John J. O'Callahan	Private	51 Tremont Street
120	Daniel J. Holleran	Private	186 Hampshire Street
3	Edward F. Looney	Private	15 Marney Street
35	Charles F. O'Connor	Private	13 Palermo Street
82	William F. Bulger	Private	11 Palermo Street
22	Francis H. Belcher	Private	38 Third Street
142	John F. Stanton	Private	401 Cambridge Street
141	Francis J. Sweeney	Private	74 Otis Street

ENGINE CO. NO. 4

A Triple Combination Pump, Hose and Chemical, with a capacity of 750 gallons a minute, and with all necessary equipment. Put in service, July, 1917. Built by the American LaFrance Fire Engine Company of Elmira, N. Y.

Badge	Name	Rank	Residence
53	George L. Church	Captain	1293 Cambridge Street
119	Walter E. Chapman	Lieutenant	13 Regent Street
42	John T. Henderson	Engineman	2 Orchard Street
24	James A. Drinkwater	Asst. Engineman	1 Coolidge Place
57	Frank J. Murray	Private	4 Warick
25	Walter L. Allen	Private	2 Cambridge Terrace
10	William J. Coyne	Private	220 Elm Street
122	Thomas J. King	Private	14 Fayette Street
143	Thomas J. Lovett	Private	11 Traymore Street
144	John J. Lucey	Private	16 Blake Street

ENGINE CO. NO. 5

A Triple Combination Pump, Hose and Chemical, with a capacity of 1,000 gallons a minute, and with all necessary equipment. Put in service February, 1918. Built by the American LaFrance Fire Engine Company of Elmira, N. Y.

Badge	Name	Rank	Residence
66	Herman E. Gutheim	Captain	29 Bigelow Street
44	Redmond M. Burke	Lieutenant	22 Hadley Street
32	Hugh J. Powers	Engineman	274 Putnam Avenue
52	Timothy F. McCarthy	Private	1269 Cambridge Street
43	William J. Beck	Private	41 Granville Road
61	William G. Johnson	Private	14 Springfield Street
59	George W. Stevens	Private	135 Antrim Street
105	Jeremiah F. Hayes	Private	17 Marney Street
116	Frank A. Casey	Private	17 Marney Street
92	Henry E. Findley	Private	248 Prospect Street
157	William J. Curry	Private	168 Tremont Street
148	Daniel P. Moynihan	Private	310 Prospect Street

ENGINE CO. NO. 6

A Triple Combination Pump, Hose and Chemical, with a capacity of 750 gallons per minute, and with all necessary equipment. Put in service, December, 1918. Built by the American LaFrance Fire Engine Company of Elmira, N. Y.

Badge	Name	Rank	Residence
113	Wm. C. Richardson	Captain	34 Rockingham Street
76	Henry J. O'Brien	Lieutenant	28 York Street
71	James P. Welsh	Private	48 Norfolk Street
69	William F. Campbell	Private	13 Decatur Street
8	Louis C. Avery	Private	161 Putnam Avenue
70	Thomas F. Mullen	Private	16 Laurel Street
103	Joseph J. Schuler	Private	107 Rindge Avenue
73	John J. Ford	Private	105 Elm Street
146	Henry E. Kilfoyle	Private	4 Douglas Street
145	George P. McCusker	Private	117 Harvard Street
21	John J. Murphy	Private	176 Pearl Street
126	John J. Dineen	Private	3 Dover Street

ENGINE CO. NO. 7

A Second size Amoskeag engine, drawn by three horses; capacity, 700 gallons per minute; has been in service since 1895. New boiler, 1911. Combination Hose and Chemical Wagon, drawn by two horses, with 800 feet of 2½ inch horse, two 30-gallon tanks and 200 feet of ¾ inch hose, and all other necessary equipment.

Badge	Name	Rank	Residence
17	James H. Furfey	Captain	99 Magazine Street
26	Thomas F. O'Connell	Lieutenant	8½ Williams Street
83	Joseph S. Hayes	Engineman	79 Hampshire Street
136	Otis D. Powers	Private	8 Buckingham Street
36	Frank Foster	Private	94 Thorndike Street
85	James E. Cunha	Private	9 Gardner Street
7	Robert J. Buchanan	Private	20 Griggs Street
91	Timothy J. Murphy	Private	42 Marcellar Street
34	Charles H. Leddy	Private	6 Marie Avenue
80	William E. Foley	Private	216½ Harvard Street
137	Joseph McKenna	Private	417 Portland Street
90	Henry A. Cutting	Private	1 Pine Street

ENGINE CO. No. 8

A Triple Combination Pump, Hose and Chemical, with a capacity of 750 gallons per minute, and with all necessary equipment. Put in service March, 1919. Built by the American LaFrance Fire Engine Co., of Elmira, N. Y.

Badge	Name	Rank	Residence
88	William J. Anderson	Captain	100 Hammond Street
1	William J. Atkinson	Lieutenant	48 Granville Road
40	John Gibson	Private	76 Reservoir Street
123	Francis V. Doyle	Private	33 Oliver Street
49	George E. Lorrigan	Private	240 Huron Avenue
86	Thomas L. Wilkshire	Private	124 Garden Street
37	Charles L. Carrier	Private	32 Granville Road
13	William V. Jefferson	Private	244 Concord Avenue
60	John P. Wallace	Private	609 Mt. Auburn Street
147	Francis A. Lyshorn	Private	286 Concord Avenue

LADDER CO. NO. 1

A 75 foot Aerial Ladder Truck, motor drawn; equipped with 275 feet of ladders, also equipped with jumping net, life line, etc. Put in service January, 1919. Built by the American LaFrance Fire Engine Company of Elmira, N. Y.

Badge	Name	Rank	Residence
129	William H. Barrow	Captain	106 Fayerweather St.
65	Warren A. Dale	Lieutenant	36 Chilton Street
20	John J. Balfe	Private	377 Norfolk Street
56	Thomas A. Haley	Private	14 Woodbridge Street
38	Charles N. Anderson	Private	207 Hamilton Street
96	Fugene L. O'Keefe	Private	19 Rindge Avenue
67	Daniel A. Walsh	Private	206 Rindge Avenue
31	James W. Breslin	Private	17 Clay Street
68	Emerill B. Beucler	Private	1 Columbia Terrace
149	Timothy F. White	Private	2 Highland Park
150	Thomas W. Lane	Private	76 Bolton Street
159	Leo G. Cook	Private	426 Huron Avenue

LADDER CO. NO. 2

Combination ladder truck and chemical, drawn by three horses; equipped with 445 feet of ladders; longest ladder 65 feet extension; two 35-gallon tanks; 200 feet of ¾ inch chemical hose; life line, etc. Put in service, 1902.

Badge	Name	Rank	Residence
28	Albert R. Wait	Captain	114 Hampshire Street
102	Charles J. McElroy	Lieutenant	79 Thorndike Street
50	Joseph A. McDonald	Private	267 Windsor Street
107	Michael Mullen	Private	5 Carlisle Street
128	William J. Sullivan	Private	2 Harding Street
124	Joseph King	Private	76 Thorndike Street
106	Thomas J. Lane	Private	134 Otis Street
51	Michael R. Hayes	Private	81 Webster Avenue
45	John J. Kelleher	Private	33 Fifth Street
46	Joseph Silveira	Private	130 Elm Street
23	Edward E. Gaughan	Private	26 Tremont Street
99	James E. Durnan	Private	27 Highland Avenue

LADDER CO. NO. 3

Ordinary ladder truck, drawn by three horses, equipped with 340 feet of ladders, the longest ladder 65 feet extension; also equipped with jumping net, life line, etc. Put in service, 1892.

Badge	Name	Rank	Residence
98	John T. McNamee	Captain	209 Hamilton Street
89	Benjamin McArthur	Lieutenant	69 Norfolk Street
110	Mortimer J. Hartney	Private	63 Henry Street
108	Thomas J. Parks	Private	294 Prospect Street
117	Morris A. Skold	Private	259 Washington Street
94	James H. McCabe	Private	247 Hampshire Street
97	John F. McPherson	Private	27 Grant Street
104	William F. McGrath	Private	166 Putnam Avenue
109	Joseph W. McCloskey	Private	71 Vassal Lane
14	Michael J. Murphy	Private	138 Thorndike Street
55	William F. Davidson	Private	117 Elm Street
151	William Quayle	Private	19 Marcella Street

LADDER CO. NO. 4

Ordinary ladder truck, drawn by three horses. equipped with 340 feet of ladders; longest ladder, 65 feet extension; jumping net, life line, etc. Put in service, 1905.

Badge	Name	Rank	Residence
133	Edward F. Conroy	Captain	4 Nutting Road
125	Arthur L. Marshall	Lieutenant	9 Museum Street
9	Edward F. Kelly	Private	60 Rice Street
79	John F. Collins	Private	37 Yerxa Road
132	Matthew F. Gleason	Private	24 Chilton Street
54	Joseph H. Caldwell	Private	216 Banks Street
114	Ursise E. Fournier	Private	19 Holly Street
74	Frank F. G. Hanley	Private	1 Dover Street
58	William H. Daley	Private	91 Montgomery Street
152	John A. Cardoso	Private	36 Chilton Street
156	William F. Newman, Jr.	Private	29 Rindgefield Street
158	Joseph R. Flynn	Private	131 Garden Street

COMBINATION NO. 2

Combination hose and chemical, motor drawn, with 1,000 feet of 2½ inch hose and 200 feet of ¾ inch chemical hose, two 35 gallon tanks, and all other necessary equipment. Put in service, 1916.

Badge	Name	Rank	Residence
16	John D. Shea	Captain	15 Athens Street
134	Timothy Curran	Lieutenant	102 Fayerweather St.
41	Edward J. Shea	Private	375 Walden Street
87	James H. Sullivan	Private	53 Foster Street
72	Charles P. Cox, Jr.	Private	41 Park Avenue
135	Jeremiah J. Sullivan	Private	3 Locust Street
153	George H. Carrier	Private	71 Vassal Lane
154	Lawrence A. Corcoran	Private	18 Chilton Street

CHEMICAL NO. 1

Champion chemical engine, drawn by three horses; with two 60-gallon tanks and 600 feet of ¾-inch hose. Put in service, 1894. Rebuilt, 1916.

Badge	Name	Rank	Residence
112	James T. McCabe	Captain	17 Laurel Street
11	Daniel J. O'Connell	Private	11 Lincoln Street
111	Edward L. Kelly	Private	368 Prospect Street
81	James E. Jefferson	Private	158 River Street
39	Joseph T. Ballantine	Private	69 River Street
95	Edward A. Malone	Private	1 Cottage Row

CAUSES OF FIRES AND ALARMS

Automobiles	28
Bonfires	18
Careless use of lighted match	32
" " " " cigar, cirgarette or pipe	71
" " " " candle	12
" " " gasoline	11
Children playing with matches	23
Chimney fires	72
Clothing too near hot stove	7
Curtain blown against lighted lamp or gas-jet	5
Christmas trees	2
Defective A. D. T. systems	17
" Automatic systems	16
" wiring in electric cars	12
" electric-light wires on poles, trees, etc.	17
" oil stoves and furnaces	5
" gas tubing	2
Dump fires	16
Electric flat-iron	1
False alarms	72
Fat or meat on stove	12
Firecrackers	15
Grass or brush fires	16
Gas leaking from pipe or meter	6
Hot ashes in wooden box or barrel	14
Hot iron against woodwork	1
Hot water front in stove burst	2
Incendiary	22
Kerosene oil lamps	8
Kerosene spilled on hot stove	1
Lighted lantern exploded	1
Motorcycle	1
Open and defective fire places	2
Overheated stove or smoke pipe	6
Overheated boiler or drying room	4
Oil burning engine taking fire	1
Oil boiling over from tank and taking fire	2
Rekindle	2
Rubbish in building or yard	23
Responded to alarms out of city	21
Rats and matches	8
Rags on top of furnace	1
Set by boys	20
Smoke or steam mistaken for fire	21
Sparks from stove, furnace or fireplace	7
Sparks from locomotive	8
Smoking in bed	4
Spontaneous combustion	10
Swinging gas jets	3
Thawing water pipes	9
Unknown	23
Unnecessary	30
	743

REPORT OF THE SUPERINTENDENT OF STREETS

To the Honorable, the City Council:
Gentlemen:

In accordance with the provision of Chapter 25 of the Revised Ordinances of the City of Cambridge, the annual report of the Superintendent of Streets for the fiscal year ending March 31, 1920, is herewith submitted.

The year just passed has been the largest in point of appropriations, amount of work accomplished and men employed in the history of the department. Following the close of the great war, road building material and labor were easier to obtain, and the department made considerable effort to catch up with its maintenance and construction program, which had to be neglected the previous year. The total amount expended for all purposes during the year was $798,991.68.

In the exhibits which follow, the "segregated budget" classifications are given and are followed by analyses compiled to show in a more understandable manner what the money was expended for.

The cost of functional divisions, maintenance general, street cleaning, street watering, snow removal, bridges and pavement repairs under the maintenance account and the collection of ashes and collection of house offal are shown under the sanitary account and to these figures have been added the allotment of the stable account, which shows the cost of horses used on the particular item.

MAINTENANCE "A"—PERSONAL SERVICE

Superintendent of Streets	$2.624 97	
Chief Clerk	2,116 66	
Office Clerks	2.312 00	
Yard Clerks	456 00	
Foremen	7,614 10	
Working foreman, part time	246 87	
Pavers and stone cutter, part time	1,998 07	
Graders, part time	12,068 28	
Engineers, part time	2,886 13	
Chauffeur	1.516 74	
Drawtenders	20,821 95	
Laborers	94,965 27	
		$149,627 04

MAINTENANCE "B"—SERVICE OTHER THAN PERSONAL

Appropriation		$10,080 00
Transferred additional		1,156 01
		$11,236 01
Printing and binding	$86 73	
Postage	60 12	
Advertising	90 31	
Freight	61 54	
Teaming	8,083 20	
Light and power	435 92	
Telephone service	196 17	
Motor vehicle repairs	627 90	
Medical service	167 00	
Testing road oils	36 75	
Motor Vehicle fees and licenses	62 00	
Miscellaneous service items	1,328 37	
		$11.236 01

MAINTENANCE "C"—EQUIPMENTS

Appropriation		$4,605 00
Additional appropriation		65 64
		$4,670 64
Snow plows	$318 50	
Automobiles	1,087 60	
Tools	513 97	
Horses	2,508 80	
Brogans	6 86	
Miscellaneous equipment	234 91	
		$4,670 64

MAINTENANCE "D"—SUPPLIES

Appropriation		$4,575 00
Additional appropriation		1,780 65
		$6,355 65
Office supplies	$487 86	
Fuel	259 24	
Automobile supplies	3,357 05	
Miscellaneous supplies	2,251 50	
		$6,355 65

MAINTENANCE "E"—MATERIALS

Appropriation		$31,500 00
Transferred from		12,501 51
		$18,999 49
Highway materials	$17,528 57	
Bridge materials	1,470 92	
		$18,999 49

ANALYSIS OF EXPENDITURES BY FUNCTIONAL DIVISIONS

BRIDGES

For Drawtenders' salaries, Canal Bridges		$20,812 95
General labor, on repairs		913 75
First Street Bridge		
Power	$60 00	
Light	22 93	
Fuel	36 11	
Lumber and hardware	330 26	
Salt	4 41	
Tools	4 10	
		457 81
Third Street Bridge		
Power	$60 00	
Lumber and hardware	116 34	
Salt	4 41	
Tools	4 00	
		184 75
Sixth Street Bridge		
Power	$60 00	
Lumber and Hardware	315 34	
Machinery repairs	48 56	
Salt	4 41	
Tools	4 00	
		432 31
Commercial Avenue Bridge		
Power	$195 00	
Light	23 69	
Fuel	47 40	
Lumber and hardware	332 93	
Electrical repairs	321 23	
Machinery repairs	115 15	
Paint	6 83	
		1,042 23
Mt. Auburn Street Bridge		
Lumber and hardware		165 23
Huron Avenue Bridge		
Paint		49 00
Prison Point Bridge		
Lumber and hardware		68 27
Wellington Street Bridge		
Lumber and hardware		88 20
		$24,214 50

SNOW REMOVAL

Labor, payrolls	$25,410 86	
Stable charge	1,262 60	
New Plows, for sidewalks	73 50	
Plow attachment for truck	265 93	
Shovels	158 37	
Brooms	34 00	
Picks	30 38	
Handles	24 21	
Sand	140 53	
Salt	20 58	
Machine parts	7 06	
		27,428 02

STREET CLEANING

Labor, payroll	$55,189 74	
Hired teams	1,744 06	
Stable charge	10,553 92	
Refilling machine brooms	102 90	
Forks	23 08	
Brooms	157 50	
Push carts	224 91	
Hoes	32 34	
Shovels	56 21	
Machine parts	8 23	
		68,092 89

STREET WATERING

Labor, payrolls		$1,386 67	
Sprinkling by hired teams		6,339 14	
Stable charges		273 76	
Power for pump plant		115 00	
Repairs to equipment		648 03	
Miscellaneous equipment and parts		82 07	
Road oils and surfacings			
Atlantic Refining Co. Oil, 85,773 gallons	$5,652 93		
Joseph J. Galvin Oil, 10,023 gallons	884 03		
Boston Engineers Supply Oil, 10,194 gallons	992 03		
United Oil Products Oil, 20,325 gallons	1,754 87		
Barrett Manufacturing Co., 24,797 gallons, "B" tar	2,439 31		
American Tar Co., 3,000 gals. Rotar	294 00		
		12,017 17	
Sand		281 05	
			21,142 89

PAVEMENT REPAIRS

Labor, payrolls	$3,300 35	
Stable charges	245 44	
Bricks	233 48	
Sand	140 52	
		3,919 79

MAINTENANCE GENERAL

Executive office			
Superintendent of Streets		$2,624 97	
Clerks		4,884 66	
Printing		86 73	
Postage		60 12	
Advertising		90 31	
Telephones		196 17	
Stationery and office supplies		487 86	
			8,430 82

MAINTENANCE GENERAL

Labor, payrolls		$36,063 40	
Compensation to injured employees		1,746 68	
Stable charges		8,285 68	
Crushed stone		2,025 63	
Binders and patching material			
Tarvia "X," 8,986 gallons	$1,146 90		
Tarvia KP, 1,145 gallons	214 02		
U. S. Oil Co., 6,193 gallons	1,216 30		
Headley Patch, 578 gallons	133 11		
Standard Oil, 645 gallons	61 84		
Miscellaneous	9 35		
		2,781 52	
Steam roller repairs and supplies			
Machinery repairs	$97 04		
Oil	38 71		
Grease	9 31		
Cotton waste	15 54		
Repair parts	1,008 17		
Coal	176 23		
		1,345 00	
Street signs and stock			
Sign posts	$413 99		
Enamel signs	39 69		
Lanterns and globes	182 24		
Kerosene	149 73		
Hardware	16 63		
		802 28	
Motor Supplies and repairs			
Mechanical repairs	585 71		
Tire repairs	42 19		
Repair parts	332 05		
Gasoline	1,895 21		
Motor Oil	155 90		
Tires	950 37		
New cars	1,087 60		
Fees	62 00		
Miscellaneous	23 52		
		5,134 55	
Medical service		167 00	
Shoes		6 86	
New Horses		2,508 80	
Freight charges		40 61	
Miscellaneous items		64 87	
			60,972 88
Total			$214,201 79

REPAIRS TO HURON AVE. RAILROAD BRIDGE

Appropriation from revenue funds		$1,200 00
Additional appropriation by transfer		127 88
		$1,327 88
Paint	$54 29	
Contract for steel work	754 00	
Payrolls, painters	443 00	
Hardware, tools	76 59	
		$1,327 88

BITULITHIC PATCHING

Appropriations from revenue funds	**$6,000 00**
Repairs to Bitulithic out of guaranty	5,541 71
Balance	$458 29

PENSIONS

Expended for pensions	$10,521 26

WORKMAN'S COMPENSATION

Expended for employees compensation	$1,846 68

CANAL BRIDGES

Balance of loan		$1,951 00
Expended on First Street Bridge		
Machinery repairs	$151 61	
Timbers	419 26	
Contract work	492 97	
Hardware	13 72	
		1,077 56
Balance		$873 44

The amounts expended as above were wholly on First Street bridge.

I renew my recommendation that this entire bridge be replaced by a modern structure suitable to the traffic over it.

COMMERCIAL AVENUE BRIDGE

The fence on the westerly side and northwesterly end of this bridge has not yet been repaired, though it was reported as in a dangerous condition three years ago. The end piles in the fenders on the westerly side of the bridge are broken so as to be

practically useless. The oak guards on the face of the walls at either side of the channel are gone, leaving the bolts, which attached the timbers to the walls, sticking out over the water.

The bridge needs replanking. The leaves of the draw do not meet when they are lowered, an opening of about three inches being left between their ends, or four inches on the sidewalks.

The heel of the draw does not come up to its proper position but remains two or three inches below the level of the Z bar, against which the granite paving butts. This brings a heavy blow upon the end of the Z, and will soon break it from its fastening. There is a place at the north end of the bridge where the paving needs immediate repair.

FIRST STREET BRIDGE

This bridge has been newly planked and new timbers inserted at various weak points. How long it can continue to sustain the heavy traffic, to which it is subjected, is difficult to say. It seems to do its work, not by reason of strength, but by force of habit. The piles at the easterly and westerly ends of the line of fender piles are broken so as to be of little value.

FIRST STREET UNDERPASS

The exposed flanges of the I beams supporting the street surface are badly in need of scraping and painting.

THIRD STREET BRIDGE

At the southerly end of the bridge, the plank is separated from the back of the bridge seat by apparently two or three inches, leaving a dangerously weak place. The draw will need replanking. Four fender piles are so broken as to be of no use and two of the oak guard timbers need replacing. Two of the guard irons at the fender ends are gone.

SIXTH STREET BRIDGE

This bridge seems in good condition but will need replanking. One guard timber on the north and one on the south side of the draw should be renewed.

The usual amount of replanking was done on the bridges under control of this department. The Huron Avenue railroad bridge was repaired by the Boston Structural Steel Company under a contract awarded them. Much of the iron work was replaced and the entire understructure given a coat of paint. The electrical apparatus on the Commercial Avenue bridge gave trouble during the year and had to have considerable repairs.

The past winter was one of the most severe in recent years, and the storms of early February taxed the resources of the department. A new sidewalk plow was added to the equipment and a plow attachment was purchased to be used on a five-ton truck.

Particular attention has been given to the street cleaning division the entire year. The section force has been maintained constantly and special gangs have been sent through the manufacturing and residential sections in order to co-operate with the civic organizations interested in keeping the city clean.

The department was fortunate in being able to obtain a supply of road oil of satisfactory quality at a specially reasonable price, and practically all the water-bound and a few of the paved streets were given a coating of oil. With the yearly increase in the yardage of tar and asphalt-bound surfaces, it will be necessary to make sufficient appropriation each year for sealing this work when necessary, as it not only renders the road dustless, but adds to its life by preserving the surface.

The amounts expended for repairing pavements were largely for defective gutters, sidewalks and sunken paving. There are still many places in the city that are unsightly, due to the removal of trees, and a considerable allowance should be made this year for their repair.

The expenditures under maintenance general are self-explanatory, showing a larger amount of patching done than in any previous year. A large quantity of cold patching material was used in the fall, with good results.

The pension account of this appropriation will be turned over to a separate department next year and be included in a general pension account.

STABLE "A" PERSONAL SERVICE

Payrolls, stablemen and mechanics	$46,900 85

STABLE "B" SERVICE OTHER THAN PERSONAL

Appropriation		$1,005 00
Additional transfers		390 64
		$1,395 64
Light	$674 54	
Telephones	160 94	
Wheelwrighting	112 70	
Medical service	12 00	
Veterinarian hospital	16 25	
General repair work	399 15	
Outside shoeing	20 06	
		1,395 64

STABLE "C" EQUIPMENT

Appropriation	300 00
Transferred from	283 09
	$16 91
Tools	16 91

STABLE "D" SUPPLIES

Appropriation		$35,050 00
Additional transfers		10,510 89
		$45,560 89
Ice	$27 54	
Coal	1,697 07	
Forage Supplies	37,513 84	
Toilet supplies	7 74	
Disinfectant	23 52	
General shop supplies	6,290 18	
		$45,560 89

STABLE EXPENDITURES

YEAR OF 1919–1920

Stable labor		$27,803 50
Forage:		
Hay	$21,333 98	
Oats	15,119 22	
Straw	640 18	
Bran	400 82	
Salt	19 64	
		37,513 84
Lighting:		
Raymond Street	$220 13	
Hampshire Street	239 03	
Tannery Street	215 38	
		674 54

Telephones:			
Raymond Street	$63 14		
Hampshire Street	63 31		
Tannery Street	34 49		
		160 94	
Coal		$1,697 07	
Ice		27 54	
Brushes		48 75	
Sponges		169 34	
Platform lumber		254 65	
Stall tops		943 77	
Plumbing and stove repairs		46 79	
Brooms		29 84	
Soap and toilet supplies		104 49	
Roofing repairs		301 52	
Veterinarian service		16 25	
Disinfectant		23 52	
Axle grease		62 21	
Medical service		12 00	
Miscellaneous items		98 52	
			$69,989 08

CARPENTER SHOP

Labor of carpenters		$2,196 31	
Lumber	$514 08		
Hardware, tools	152 08		
Mill work	164 92		
New axles	73 50		
Miscellaneous	29 64		
		934 22	
			3,130 53

PAINT SHOP

Labor of painters		$6,964 23	
Paints	$689 81		
Brushes and tools	19 76		
Turpentine	20 78		
Miscellaneous	2 50		
		732 85	
			7,697 08

BLACKSMITH SHOP

Labor of blacksmiths		$7,559 88	
Horse shoes	$494 07		
Nails	116 76		
Pads and leathers	258 76		
Tar	10 76		
Steel and iron	163 68		
Tools	138 77		
Calks, regular	166 39		
Calks, drive	291 45		
Bolts, nuts, etc.	346 56		
Outside shoeing	20 06		
Miscellaneous	11 07		
		2,018 33	
			9,578 21

HARNESS SHOP

Labor, harness makers		$2,402 00	
Stock	$701 44		
Collars	164 64		
Blankets	206 98		
Feed bags	29 40		
		1,102 46	
			3,504 46
			$93,899 36

APPROPRIATIONS

"B"	Service	$1,395 64	
"C"	Equipment	16 91	
"D"	Supplies	45,560 89	
"F"	Compensation	25 07	
		$46,998 51	
"A"	Labor, payrolls	46,900 85	
			93,899 36

SANITARY DIVISION

A-1—Personal Service:

Foreman	$1,875 00	
Foreman one-half time	937 35	
Foreman on platform	1,320 16	
Laborers on Offal teams	55,159 28	
Laborers on shadbolt wagons	67,782 78	
Laborers on small teams	43,076 46	
Chauffeurs	256 75	
		$170,407 78

B—Service Other Than Personal:

Repairs to motor vehicles	$792 63	
Medical service	414 90	
Registrations	36 00	
General service	310 12	
		1,553 65

C—Equipment:

General equipment	211 61

D—Supplies:

Medical supplies	$35 68	
Motor supplies	2,377 14	
General supplies	33 37	
		2,446 19

F—Special Items:

Pensions	$1,857 64	
Compensation payments	1,422 54	
		3,280 18
		$177,899 41

The items in the foregoing accounts are analyzed by functional divisions as follows:

COLLECTION OF ASHES

Foreman	$1,875 00	
Laborers on Shadbolt wagons	67,782 78	
Laborers on other teams	43,076 46	
Chauffeurs	256 75	
Compensation to injured employees	1,093 61	
Stable charges	29,613 28	
Medical service	414 90	
Medical supplies	35 68	
Ash cart covers	206 44	
Repairs to incinerator	310 12	
Lumber and hardware	33 37	
Motor equipment, repairs and supplies:		
Repairs to trucks	735 70	
Repairs to cars	19 10	
Repairs to tires	37 83	
Motor and truck supplies	820 37	
Spare parts, trucks	151 98	
Spare parts, cars	219 28	
Motor oil	273 43	
Gasoline	848 76	
Grease	50 60	
Waste	12 72	
Registrations	36 00	
		$147,904 16

COLLECTION OF OFFAL

Foreman, half time	$937 35	
Foreman at platform	1,320 16	
Laborers on offal collection	55,159 28	
Compensation	328 93	
Stable charge	20,673 60	
Miscellaneous items	5 17	
		78,424 49
		$226,328 65

The amounts of rubbish and ashes collected during the year were about normal. There are about 176,000 cubic yards of rubbish and ashes collected and 24,577 cord feet of offal gathered and sold.

The receipts for offal for the year were $24,550.00, and more could be sold if obtained.

There has been an increase in the cost of collection in both of these divisions during the year as the labor rate was increased from $3.50 to $3.75 in October, 1919, and again to $4.00 on March 1, 1920.

No changes in the collection methods have been made during the past year, as the hopper recently built has not been altered to allow the proper working. Additional funds have been requested and plans made for this work, and I anticipate its completion early next year.

The question of providing dumping places in the western part of the city has been given careful attention and recommendations for acquiring rights in certain property have been made to the Mayor. The suggestion of the Board of Trade on disposal of ashes and rubbish by scows has been investigated and given consideration.

WESTERN AVENUE—JAY TO THE BRIDGE

Appropriation, 1918 balance		$4,711 90
Additional appropriation		13,554 18
		$18,266 08
Payroll	$12,228 56	
Stable charges	780 00	
Hardware, tools	183 65	
Gravel	1,522 15	
Cement	2,064 98	
Concrete stone	1,108 79	
Crushed stone	174 32	
Lighting	68 85	
Rent of mixer	88 20	
Repairs to mixer	46 58	
		18,266 08

The south side of Western Avenue, from Jay Street to the Western Avenue bridge, was completed early in the season. The work was exactly the same as the remainder of the avenue completed in previous years. The old blocks were turned and repaved on a concrete base and grouted with cement.

There is no further construction of this type needed on this street, and but little maintenance should be needed for some years, as the railway tracks and center strip as well as the traffic areas are paved in such a manner as to withstand the heavy loads continuously passing over them.

HAMPSHIRE STREET—PROSPECT TO INMAN SQ.

Appropriation		$12,500 00
Transferred		30 44
		$12,530 44
Payroll	$7,228 97	
Stable charges	692 50	
Hardware, tools	95 07	
Gravel	515 96	
Cement	1,883 45	
Concrete stone	405 19	
Crushed stone	31 66	
Lighting	296 98	
Sundries	10 29	
Repairs to mixer	148 50	
Recutting blocks	1,217 87	
		12,530 44

This section of Hampshire Street, from Prospect Street to Inman Square, was repaved this year with recut granite block, and grouted with cement. The old blocks were barred out of the street, recut and piled on the sidewalk by a contractor. The old gravel base was removed and a first-class concrete base substituted. Upon the sand cushion which covered this base the recut blocks were paved back and the whole grouted. The new surface is much smoother, better appearance and rugged enough to stand the heavy traffic that the street carries.

This type of work appears to be so successful that I should recommend that it should be continued still farther down Hampshire Street until the entire street is done.

PORTLAND STREET

Appropriation		$21,000 00
Transferred from		279 71
		$20,720 29

EDGESTONES AND SIDEWALKS

Appropriation		$25,937 27
Payroll	$9,952 94	
Repairs to mixer	92 09	
Hardware, tools	227 81	
Gravel	571 34	
Cement	4,125 85	
Recutting granite blocks	3,002 18	
Concrete stone	1,330 37	
Crushed stone	124 83	
Lighting	250 38	
Stable charges	1,043 50	
		20,720 29

The repaving of this main street was started this year and the section between Main Street and Broadway was completed.

The old granite block which had been in the street for many years on a sand base was barred out, recut and piled on the sidewalk by a stone contractor. A concrete base was then put in and the recut blocks repaved on to it. The improvement in the street has occasioned considerable satisfaction and I shall recommend that the rest of the street be given similar construction to Cambridge Street the coming year.

CONSTRUCTION OF BURLEIGH STREET

Appropriation		$6,000 00
Payroll	$180 50	
Hardware, tools	4 75	
Cement	692 67	
Lighting	112 15	
		990 07
		$5,009 93

The appropriation for this street was passed late in the fall and, owing to building operations of the Lever Brothers Company and cold weather, there was little done to the surface of this street.

One car of cement was ordered and received for this job and is being held in storage. It is proposed to pave the street with recut block on a suitable base early the coming season.

EDGESTONES AND SIDEWALKS

Appropriation		$25,937 27
Payroll	$13,839 28	
Teaming	30 00	
Stable charges	1,130 00	
Lumber	18 37	
Hardware, tools	183 65	
Bricks	2,803 67	
Edgestones	6,553 05	
Gravel	914 61	
Rebates, Granolithic sidewalks	159 85	
Lighting	304 79	
		25,937 27

The average amount of new sidewalk work was about the same as former years, although the prices of materials were generally higher.

One of the largest and most needed jobs done under this appropriation was the Broadway sidewalk of Broadway Common. The entire side was paved with brick and the muddy condition that obtained formerly was eliminated.

There has been an unusual demand for driveways during the year and many petitions for this class of work, together with edgestones and brick sidewalks, are now in the files awaiting completion. The scarcity and high prices of cement have slowed up the granolithic sidewalk business, and the amount of rebates paid this year was small.

The usual appropriation for this purpose should be included in the loan budget the coming year.

GORE STREET

Appropriation		$26,000 00
Additional		9,000 00
		$35,000 00
Payroll	$4,687 37	
Hardware, tools	11 00	
Lumber	1 28	
Binder	193 79	
Bitulithic surface	6,440 58	
Lighting	178 75	
Sundries	3 53	
		11,516 30
Balance		$23,483 70

It was decided to cover the old, worn-out granite block surface on this street with bitulithic pavement, and the original appropriation was increased so that this might be completed. The old surface was brought as nearly to grade as possible by repaving sunken portions and straightening up edgestones and catchbasin bibs. The work was commenced at Kelley square and continued toward Sixth Street. There were 3,319.2 square yards of bitulithic surface extending to Fourth Street that were finished before cold weather set in, although the preparation work ahead continued until the snow fell.

It is proposed to commence this work again early in the spring and extend it to the Somerville line.

This is the first of this type of construction to be attempted in this city, and the result will be watched with considerable interest. The work is laid under the usual five-year guaranteee.

MASSACHUSETTS AVENUE, LAFAYETTE SQUARE TO RAILROAD CROSSING

Appropriation		$25,000 00
Transferred		2,720 61
		$27,720 61
Payroll	$5,957 74	
Recutting blocks	375 53	
Hardware, tools	32 83	
Gravel	24 49	
Paving between tracks	3,944 84	
Concrete stone	60 71	
Warren Bros., Binder	1,463 63	
Bitulithic surface	15,150 65	
Lighting	255 19	
Stable charges	455 00	
		27,720 61

This section of Massachusetts Avenue, between Lafayette Square and the railroad crossing, was covered this year with bitulithic pavement. The old vitrified brick surface was brought to grade, and the two-inch top laid upon it. At the track there was a two-foot strip of recut granite block laid in cement grout.

The track was relaid the previous year and the railroad company paved the entire track area under agreement with the City of Cambridge at that time. The city paid the railway company the sum of $3,944.84 for its share of the work.

The condition of the avenue as a whole is good, and, while some maintenance work will be necessary each year, no further construction will be needed for some years.

OXFORD STREET, ENTIRE LENGTH

Appropriation		$25,000 00
Additional		5,465 80
		$30,465 80
Payroll	$2,653 58	
Stable charges	325 00	
Hardware, tools	68 06	
Binder	1,783 48	
Bitulithic surface	25,415 76	
Fuel	114 82	
Lighting	105 10	
		$30,465 80

This street was completed entirely this year with bitulithic pavement laid on the old macadam base. The old surface was a light, water-bound macadam, about worn out, so that but little of the waste was of value.

Some binder was required to bring the old surface to grade and the street was built from curb to curb. There were 13,098.2 square yards in the street, laid under the usual five-year guaranty.

It is thought that now a first-class smooth surface exists on this street that it will relieve a considerable amount of the traffic from Massachusetts Avenue. Proper warning signs have been placed to safeguard foot travellers crossing this street.

QUINCY SQUARE

Appropriation		$12,000 00
Transferred from		3,845 05
		$8,154 95
Payroll	$3,167 95	
Inspection wood blocks	25 89	
Repairs to mixer	29 90	
Hardware, tools	117 45	
Gravel	192 22	
Cement	687 79	
Expansion joint	30 24	
Lumber	5 00	
Wood blocks	3,155 75	
Concrete stone	227 24	
Fuel	16 00	
Lighting	92 71	
Stable charges	397 50	
Sundries	9 31	
		8,154 95

PUTNAM SQUARE

Appropriation		$6,000 00
Additional		3,259 05
		$9,259 05
Payroll	$3,804 81	
Stable charges	552 50	
Wood block inspection	25 89	
Sewer work	7 82	
Hardware, tools	148 70	
Gravel	132 28	
Cement	794 07	
Asphalt joint	30 24	
Wood blocks	3,428 22	
Concrete stone	235 69	
Fuel	18 28	
Lighting	80 55	
		$9,259 05

This square and Quincy Square, which precedes it, were the only two unpaved portions of the main thoroughfare of the city, and this year were paved with wood block to correspond with the adjoining pavements.

The usual wood block construction was followed out on these two jobs. A five-inch concrete base, one inch of cement mortar, and a three and one-half inch deep yellow pine block laid with the usual expansion joint.

The blocks were supplied by the American Creosoting Company and inspected by R. Ernest Beatty of New York.

MOUNT AUBURN STREET, BRATTLE SQUARE TO PUTNAM SQUARE

Appropriation		$25,000 00
Transferred from Parkway		4,398 00
Transferred from Portland Street		26 69
		$29,424 69
Payroll	$6,810 53	
Stable charges	1,282 50	
Hardware, tools	248 81	
Binder	1,103 90	
Bitulithic surface	19,759 10	
Fuel	108 62	
Lighting	111 23	
		29,424 69

This section of Mount Auburn Street, from Brattle Square to Putnam Avenue, was resurfaced with bitulithic pavement on the old macadam base. The job was started in hot weather and the top sur-

face, which was scarified, was of sufficient viscosity to enable it to be dumped on several nearby streets and rolled in making excellent surfaces for the less travelled side streets. These were later given a blanket coat of standard "B" binder and should wear for some few years.

There were 10,085 square yards in the area, which was laid under the usual five-year guaranty.

CONSTRUCTION OF BRATTLE STREET

Appropriation		$36,000 00
Transferred to other accounts		1,777 60
		$34,222 40
Payroll	$6,782 99	
Hardware, tools	174 05	
Crushed stone	17 04	
Bitulithic surface	25,488 32	
Fuel	174 71	
Lighting	10 29	
Stable charges	1,575 00	
		34,222 40

This main thoroughfare was started this year with permanent pavement replacing the old tar macadam surface.

The tar surface was removed, commencing at Brattle Square and extending to Craigie Street. It was carefully stripped off and a number of the adjacent streets were resurfaced with it. A list of these streets and their areas is shown in this report.

After the necessary grading was done, a bitulithic surface was then appplied to the macadam base. This two-inch top was laid under the usual five-year guaranty.

There were 13,135.6 square yards in the entire job and I would recommend that the entire street out to Mount Auburn Street be completed the coming year.

STREETS RESURFACED WITH TOP SURFACE OF MT. AUBURN STREET

Street	Stone	Binder	Cost	Loads of Filling	Square Yards
Bow, Mt. Auburn to Arrow	$65 00	$125 00	$190 00	115	2,000
Arrow Street, Bow to Mass Ave.	64 25	222 25	286 50	105	2,000
Chatham Street, entire	32 94	109 25	142 19	83	2,150
Cleveland Street, entire	46 80	34 50	81 30	46	600
Ellery Street, entire	211 50	287 50	499 00	169	5,600
Felton Street, entire	61 10	57 50	118 60	24	1,000
Green Street, dead end				51	
Holyoke, Mt. Auburn to Mill	11 75	8 63	20 38	12	200
Mill Street, entire	58 75	80 50	139 25	167	1,500
Prescott Street, entire	70 53	126 50	197 03	162	3,000
South Street, entire	30 55	40 25	70 80	86	750
Trowbridge Street, Mass Ave. to Broadway	151 00	230 00	381 00	97	4,000
	$804 17	$1,221 88	$2,026 05	1,117	22,800

STREET RESURFACED WITH TOP SURFACE OF BRATTLE STREET

Appian Way, entire	$59 86	$57 50	$116 96	81	1,000
Chauncy Street, entire	77 55	207 00	284 55	93	3,700
Church Street, entire	39 55	92 00	131 95	54	1,500
James Street, entire	47 00	57 50	104 50	48	1,050
Willard Street, entire	94 00	80 50	174 50	41	1,400
	$317 96	$494 50	$812 46	317	8,650

PROSPECT STREET

Broadway to Cambridge

Appropriation, 1918 balance		$9,415 30
Additional appropriation		3,500 00
		$12,915 30
Transferred to other accounts		1,431 83
		$11,483 47
Payroll	$3,615 29	
Stable charges	242 50	
Recutting blocks	272 46	
Hardware, tools	58 12	
Gravel	93 54	
Cement	341 83	
Granite blocks	17 77	
Concrete stone	75 95	
Binders	550 51	
Bitulithic surface	5,925 98	
Lighting	202 81	
Bitulithic patch	31 80	
Repairs to mixer	54 91	
		11,483 47

The section on Prospect Street, from Broadway to Hampshire Street, was completed early in the season, as it was prepared late in the previous season and could not be covered in on account of the weather.

The old brick pavement was taken out in some places and simply brought to grade in others and a bitulithic pavement laid over it.

The railway company have a new and well constructed rail through this street and the track areas and dummy strip are laid with granite grouted with cement.

The section from Hampshire Street to Cambridge Street was completed later in the year, as the special work at the corner of Hampshire Street required renewing.

There are 3,054 square yards in the new work laid under the usual five-year guaranty.

CONSTRUCTION OF CHARLES RIVER PARKWAY, MASSACHUSETTS AVENUE TO AMES STREET

Appropriation	$15,057 02
Transferred to other accounts	4,398 00
	$10,659 02

Payroll	$1,716 17	
Sewer work	54 88	
Hardware, tools	48 86	
Crushed stone	108 58	
Bitulithic surface	8,101 17	
Fuel	49 64	
Lighting	10 10	
Binder	214 12	
Stable charge	355 00	
		10,659 02

This section of Charles River Parkway was completed early in the year, as it was left incomplete on account of the weather the previous fall. The work of grading and rebuilding the drainage was done the year before, and but little work was left in preparation for the two-inch bitulithic surface which was laid on the old macadam base. There were 4,175 square yards of this work laid.

This road, from Massachusetts Avenue to Ames Street, is extensively used by heavy truck traffic and I would recommend that the remainder of the parkway be completed.

BITUMINOUS MACADAM RESURFACING 1919

	Square Yards	Payroll	Binder	Stable Charges	Fuel	Crushed Stone	Miscellaneous	Total
Acorn Street, entire	935	$155 47	$170 52	$35 00	$18 45	$562 05	....	$941 49
Allston Street, Brookline to Waverly	4,000	853 22	571 49	107 50	66 91	1,409 90	....	3,009 02
Appleton Street, Highland to Brattle	3,000	290 17	647 88	52 50	47 07	1,040 68	1 22	2,079 52
Arlington Street, entire	3,800	520 59	646 80	80 00	98 93	1,323 92	1 62	2,671 86
Baldwin Street, entire	3,300	321 21	679 53	57 50	64 32	1,305 86	8 82	2,437 24
Cameron Avenue, entire	2,420	428 54	326 93	90 00	21 41	433 52	17 15	1,317 55
Clay Street, entire	4,000	422 46	820 84	125 00	20 98	1,447 48	1 47	2,838 23
Columbia Street, Camb. to Som. line	1,200	73 63	242 26	....	....	644 26	....	960 15
Dana Street, Harvard to Broadway	1,800	200 78	329 28	5 00	17 16	702 38	13 13	1,267 73
Eighth Street, Otis to Spring	1,400	103 50	256 76	....	72 67	248 28	....	681 21
Fifth Street, Otis to Winter	740	352 93	518 03	25 00	16 00	937 89	....	1,849 85
Fourth Street, Winter to Bridge	....	....	84 52	....	....	....	....	84 52
Franklin Street, Putnam Avenue to Western Avenue	6,555	931 94	1,732 53	232 50	93 02	2,837 43	52 12	5,879 54
Fayerweather, Vassal Lane to Concord Avenue	....	123 00	....	....	54 00	92 05	185 51	454 56
Gibson Street, entire	1,400	195 50	215 60	50 00	32 85	731 25	....	1,225 20
Granville Road, Vassal Lane to Saville	....	53 75	....	....	....	....	....	53 75
Highland Street, entire	3,600	836 18	539 00	127 50	47 90	1,152 31	....	2,702 89
Huron Avenue, Raymond Street to Upland Road	2,600	1,007 17	336 04	187 50	44 94	766 70	....	2,342 35
Irving Street, Kirkland to Bryant	2,700	287 50	465 70	152 50	44 47	1,131 67	....	2,081 84
Leonard Avenue, entire	2,500	123 76	404 42	5 00	28 47	964 04	....	1,525 69
Maple Avenue, Broadway to Cambridge	3,550	266 64	682 08	30 00	60 14	1,370 06	13 13	2,422 05
Newton Street, entire	1,000	116 38	189 14	10 00	19 13	409 01	....	743 66
Otis Street, Second to Fifth	4,250	523 92	1,261 13	87 50	79 51	1,796 33	24 62	3,773 01
Palermo, entire	1,000	149 71	269 50	....	33 14	325 64	....	777 99
Plymouth, Hampshire to Portland	3,250	321 23	1,046 97	35 00	37 98	1,394 00	....	2,835 18
Scott, Irving to Somerville line	3,420	780 94	900 95	90 00	29 40	1,509 37	....	3,310 66
Sixth Street, Cambridge to Gore	800	131 02	60 00	12 50	15 41	337 84	....	556 77
Spring Street, Third to Sixth	4,500	651 34	1,286 35	65 00	49 25	2,344 00	....	4,395 94
Thorndike, Second to Ninth	8,000	865 47	2,048 09	77 50	64 19	3,652 91	24 63	6,732 79
Upland Road, Raymond to Huron Ave.	3,250	773 10	1,322 02	77 50	34 57	1,469 93	....	3,677 12
Washington Street, entire	7,000	1,321 31	2,601 75	50 00	73 07	3,976 49	34 79	8,057 41
Windsor St., Cambridge to Somerville	1,000	71 63	236 26	....	29 00	564 85	....	901 74
	86,970	$13,253 99	$20,892 37	$1,867 50	$1,314 34	$36,882 10	$378 21	$74,588 51

There has been a larger area constructed with bituminous macadam than any year before. All these streets will need a seal coat early next season and sufficient balance has been saved out of their original construction estimates to do this, providing the necessary material may be obtained.

INVENTORY OF REAL AND PERSONAL PROPERTY

REAL ESTATE

Location	Buildings and Land	Erection of Buildings	Purchase of Land	Feet of Land	Valuation of Land	Valuation of Buildings
Raymond St.....	City yard and stable, stable sheds, scales etc.	1897	1896	272 670	$27 000	$27 000
	Incinerator plant.....	1912	.....	.....	.....	5 000
Hampshire St....	City stable, sheds, stables and scales, including old police station.....	1885	.....	72 661	30 000	16 000
E. S. Norfolk St..	Yard and pound	.....	.....	34 650	10 400	.....
Acton, Mass.....	Land gravel bank.....	.....	1896	.....	1,500	.....
Main St.....	Land and incinerator plant	1908	.....	93 424	31 900	18 000
Tannery St.	Land and stables, sheds, etc.....	.....	.....	.....	[illegible]	
	(City Home Land)..					
					$100 800	$66 000

Total valuation of real estate..... $166,800.00

PERSONAL PROPERTY

110 horses	$30,000 00
15 watering carts	4,000 00
80 single and double carts	8,000 00
125 sets harness	2,000 00
2 concrete mixers	1,000 00
7 automobiles	3,500 00
3 five-ton trucks	8,000 00
4 steam rollers	12,000 00
22 Shadbolt carts	8,000 00
1 Watson cart	200 00
50 feet straight edgestone	50 00
30,000 second hand vitrified brick	600 00
25,000 second hand granite blocks	750 00
10,000 recut blocks	450 00
400 feet second hand flagging	200 00
50 tons crushed stone	100 00
Oil storage, Portland Street	1,000 00
Oil storage, Raymond Street	1,000 00
Stone crushing plant, Raymond Street	1,000 00
Furnace, Main Street incinerator	7,000 00
Miscellaneous machinery	600 00
Miscellaneous tools, road machines, brooms, scrapers, machine brooms, waste barrels, push carts, etc.	9,000 00
Miscellaneous wagons, plows, pungs, etc.	2,000 00
Stock of grain, hardware, paints, and general shop supplies	1,000 00
	$101,450 00

RECOMMENDATIONS

I shall again recommend the entire replacement of First Street bridge, as it is in unsafe condition and will necessitate constant repairing until this is done. It will have to come within a short time, and the structure should be of such permanency as to last for many years to come.

The policy of permanently paving the main thoroughfares should be continued this coming year, and I shall recommend the following:

Brattle Street, from Sparks to Mt. Auburn Street.
Rindge Avenue, from Massachusetts Avenue to Sherman Street.
Austin Street, entire.
Walden Street, from railroad bridge to Concord Avenue.
Prospect Street, from Cambridge Street to the city line.
Columbia Street, from Main Street to Harvard Street.

I should recommend a liberal appropriation for bituminous macadam work for the coming year and will submit a list of streets to the council and mayor for selection.

There are several of the older granite block streets laid on gravel bases that are in dire need of repaving and I recommend that the city council make generous provision for this class of work, as it provides most of the labor during the summer season. Among the more important of these are:

First Street, entire.
Portland Street, Hampshire Street to Cambridge Street.
Albany Street, Massachusetts Avenue to Erie Street.
Main Street, entire length.

I desire to call the attention of the City Council to the fact that there has been a great increase in the areas of improved streets in the past five years, and that the cost of maintenance and seal coating increases with each succeeding year. This I believe to be in the line of real economy, as proper and immediate attention to the older streets prolongs their period of usefulness and forestalls the need of reconstruction.

I again urge the acquisition of certain lands in the western part of the city for the purpose of providing adequate dumping facilities for the heavier refuse and ashes, as the present places now in use are only given by sufferance of their owners and their termination of permission to use them will seriously embarrass the department.

The readjustment of the present methods of collection and disposal of this class of material has not as yet taken place, but plans for a material change have been drawn but cannot be put into operation until certain alterations have been made to the handling structure recently built to operate this new plan.

I believe the erection of a moderate sized asphalt plant in one of the department yards would mark a forward step in economy, as such plants are in successful operation in other cities and by road contractors generally, and certain of the work now done by contract could be performed by city labor.

In commending to the Mayor and City Council a continuance of the policy of permanent paving, I am in favor of such types of paving work that the original cost of construction will preclude the necessity of annual maintenance charges for several years ahead.

I desire to express my appreciation of the assistance and co-operation of the Mayor and City Council, the Committee on Roads and the employees of the department.

Respectfully submitted,

EDWARD J. DUNPHY,

Superintendent of Streets.

REPORT OF THE COMMISSIONER OF BOSTON AND CAMBRIDGE BRIDGES

To the Honorable, the City Council of the City of Cambridge, Mass.

Gentlemen: In compliance with the provisions of Section 3 of Chapter 5 of the City Ordinances, I beg leave to submit the following report of the Bridge Department for the year ending March 31, 1920.

PRISON POINT BRIDGE

The bridge deck has been resheathed during the year and some repair work done on the piers. On the whole, the bridge is in fair condition and will only require the usual replacements next year.

CAMBRIDGE BRIDGE

There has been but little work done on this bridge during the past year. There are a great many depressions in the granite pavement, especially at the expansion joints, which, while not dangerous, make travel over the bridge somewhat bumpy, and these places should be taken up and repaved the coming year.

HARVARD BRIDGE

The sheathing over the draw span has been replaced twice during the year, and considerable repairs have been made to the iron fence.

The plank sidewalks on this bridge are in poor condition and should be replaced at once.

BROOKLINE STREET BRIDGE

This bridge was built in 1905 simply as a temporary structure, and its anticipated life at that time was estimated at ten years. Considerable repairs are now necessary in order to maintain traffic over it. The piling on this bridge is fast decaying, thereby creating a dangerous condition, and in view of the fact that this bridge has long outlived its anticipated life I would recommend that a new bridge be immediately built to replace the present structure.

RIVER STREET AND WESTERN AVENUE BRIDGES

The sheathing and some of the deck have been replaced on River Street during the year. This bridge and also Western Avenue are both of the old leaf type and will not cover the increasingly heavy traffic a great deal longer.

I should recommend that both of these bridges be replaced by modern types in the near future.

ANDERSON BRIDGE

But little has been necessary on this bridge during the past year. At the present time some of the masonry is showing signs of wear, and some repainting will be necessary during the coming year.

IN GENERAL

I desire to express my appreciation of the co-operation of the Mayors of both cities, the Boston Commissioner, the City Council, and employees of the department in the management of the department.

Respectfully submitted,

FRANCIS J. SMITH,

Bridge Commissioner.

EXPENDITURES FOR THE YEAR 1919-1920

(Being the Portion Paid by the City of Cambridge — Which is One Half — of the Total Expenditures)

	Administration	Anderson Bridge	Cambridge St., River St. Bridge	Cambridge Bridge	Essex St. Brookline St. Bridge	Harvard Bridge	Prison Point Bridge	Western Ave. Bridge to Cambridge	Totals
Salaries	$250.00		$3,801.41	$2,167.70		$4,026.72	$4,042.46		$14,288.29
Repairs		$466.00	793.24	959.54	$644.25	1,875.42	852.41	$265.64	5,856.50
Lumber			280.93		232.89	1,431.66	576.36	63.49	2,585.33
Light		298.82	25.54	1,374.08	184.68	825.21	10.34	22.69	2,741.36
Fuel			50.26			23.48	28.65		102.39
Supplies		2.50	48.66	26.35	64.41	192.79	60.79	21.94	417.44
Removing Sweepings						155.65			155.65
Printing and Stationery	56.24								56.24
Telephone and Travel Expenses	115.43								115.43
Totals	$421.67	$767.32	$5,000.04	$4,527.67	$1,126.23	$8,530.93	$5,575.01	$373.76	$26,318.63

Monthly Summary of Draw Openings, Boston and Cambridge Bridges, April 1, 1919, to March 31, 1920

	Cambridge St. River Street Bridge			Harvard Bridge			Prison Point Bridge			Western Ave. Bridge to Cambridge		
	Vessels	Cargoes	Open-ings	Vessels	Cargoes	Open-ings	Vessels	Cargoes	Open-ings	Vessels	Cargoes	Open-ings
1919												
April	8		2	1		1	6	1	4	8		2
May							6	1	4			
June	7		4	4		2	6	1	4	3		2
July	2		2				12	2	8			
August							7	1	2			
September				21		14	20	2	9			
October	2		2	11	1	8	11	2	7			
November				1		1	6	1	3			
December				2		1	18	4	10			
1920												
January							3		2			
February												
March				3		2	8	1	4			
Totals	19		10	43	1	29	103	16	57	11		4

Annual Summary of Draw Openings, April 1, 1919, to March 31, 1920

Bridge	Tugs			Barges			All Others			Total Vessels				
	Day	Night	Total	Day	Night	Total	Day	Night	Total	Day	Night	Total	Cargoes	Openings
Cambridge St. — River St.	2		2				17		17	19		19		10
Harvard	26		26	13		13	4		4	43		43	1	29
Prison Point	62	4	66	18		18	16	3	19	96	7	103	16	57
Western Ave. to Cambridge							11		11	11		11		4
Totals	88	4	92	31		31	47	3	50	166	7	173	17	98

REPORT OF THE OVERSEERS OF THE POOR

April 1, 1920.

To His Honor the Mayor and the Honorable City Council,
City of Cambridge, Mass.:

Gentlemen:

The Board of Overseers of the Poor herewith submit their annual report for the year ending March 31, 1920.

At the annual meeting of the Board held May 8, 1919, Rev. John R. McCool was unanimously re-elected Chairman for the ensuing year.

On April 15, 1919, the appointments of George P. O'Brien as Overseer of the Poor for a term of five years from May 1, 1919, and of Charles J. Williams as Overseer of the Poor for a term of four years from May 1, 1919, were confirmed by the City Council.

On May 20, 1919, the appointment of John J. Corkery as Overseer of the Poor for a term of two years from May 1, 1919, was confirmed by the City Council.

On November 24, 1919, James F. Mullen, a member of the Board for many years, died. A man of rugged honesty and sterling character, who for years devoted his time to the care and relief of the poor as a member of the St Vincent de Paul Society and the Overseers of the Poor, his loss will be keenly felt both by his associates and the unfortunate people whose circumstances obliged them to ask for relief.

The following resolutions were adopted by the Overseers of the Poor:

"WHEREAS, It has pleased Almighty God to remove from our midst James F. Mullen, who for nineteen years served as a member of the Overseers of the Poor of Cambridge, be it

"RESOLVED, That the City of Cambridge, by his death, has lost a most estimable citizen, who for so many years gave of his time and experience to alleviate the sufferings of the poor.

"The poor of Cambridge have lost a faithful friend, whose kindness of heart and devotion to duty have aided many a family over a hard place.

"This Board has lost a friend whose honesty and fidelity of purpose have been an example to them; Be it further

"RESOLVED, That these resolutions be spread on the records of this Board and a copy sent to the bereaved family."

The cost of maintaining the department is as follows:

	Expenditures	Receipts	Net Cost
Outside Aid	$133,692 80	$27,578 90	$106,113 90
City Home	38,898 05	3,066 09	35,831 96
	$172,590 85	$30,644 99	$141,945 86

Respectfully submitted,

JOHN R. McCOOL, *Chairman,*
G. P. O'BRIEN,
BERNARD B. WELCH,
CHARLES J. WILLIAMS.

OUTSIDE AID

Personal Service		
Salaries, permanent employees	$10,708 24	
Salaries, temporary employees	90 00	$10,798 24
Service Other Than Personal		
Printing and binding	$2 94	
Postage	26 16	
Transportation of persons	1,068 66	
Light and power	33 75	
Rent	100 28	
Communication	127 47	
Motor vehicle repairs and care	55 92	
Care of persons	2,274 83	
Fees	10 00	
Burials	279 00	
Medical	10 50	
Miscellaneous	1 52	3,991 03
Equipment		
Office	$21 17	
Wearing apparel	553 38	574 55
Supplies		
Office	$173 64	
Food and ice	2,097 73	
Fuel	584 97	
Medical and surgical	725 42	
Motor vehicle	109 30	
Miscellaneous	37 85	3,728 91
Special Items		
Care of dependents	$50,854 40	
Mothers' aid	63,745 67	114,600 07
Total Expenditures, Outside Aid		$133,692 80

CITY HOME

Personal Service		
Salaries and wages, permanent employees	$14,754 51	
Salaries and wages, temporary employees	81 50	$14,836 01
Service Other Than Personal		
Postage	$21 00	
Advertising	9 95	
Transportation of persons	204 16	
Hire of teams and auto	202 94	
Light and power	493 96	
Communication	91 78	
Care of persons	14 92	
Religious	77 00	
Medical	2 00	
Fees	2 00	
Boiler and elevator inspection	35 28	
Burials	168 00	
Harness repairs	11 76	
Wagon repairs	42 63	

Horseshoeing	80 49	
Miscellaneous	428 85	$1,886 72
Equipment		
Furniture and fittings	$328 05	
Tools and instruments	16 76	
Wearing apparel	1,483 49	1,828 30
Supplies		
Office	$39 85	
Food and ice	14,502 43	
Fuel	2,685 92	
Forage and animal	587 31	
Medical and surgical	533 23	
Laundry, cleaning, toilet	215 86	
Agricultural	316 08	
Chemicals and disinfectants	81 83	
Tobacco	389 43	
Miscellaneous	337 10	19,689 04
Materials		
Building	$49 23	49 23
Special Items		
Care of dependents	$608 75	608 75
Total Expenditures, City Home		$38,898 05

RECEIPTS

OUTSIDE AID

Individuals	$433 00	
Cities and Towns		
Temporary aid	$2,374 29	
Mothers' aid	1,270.14	
Commonwealth of Massachusetts		
Temporary aid	$811 20	
Sick poor	2,705 30	
Mothers' aid	19,974 97	
Burials	10 00	27,578 90

CITY HOME

Individuals	$1,920 01	
Cities and towns	18 49	
Cash sales	1,127 59	3,066 09
Total Receipts		$30,644 99

REPORT OF THE SUPERINTENDENT OF THE CAMBRIDGE CITY HOME

FOR THE YEAR ENDING MARCH 31, 1920

Cambridge, Mass., April 30, 1920.

To the Board of Overseers of the Poor:

Gentlemen: The Annual Report of the Cambridge City Home for the twelve months ending March 31, 1920, is hereby respectfully submitted.

The total number in the Home during the twelve months has been as follows:

Males	138	Adults	218
Females	106	Minors	26
Total	244	Total	244

The average number during the twelve months was 126.

Remaining in the Home March 31, 1920:

Males	74
Females	57
Boy	1
Total	132

Of these, 99 are between 60 and 95 years of age. The largest number in any 10-year group is 46 between 70 and 80 years.

There are 44 in the hospital; 31 women, 13 men.

ADMISSIONS

Showing the number and sex of adults and minors admitted in each of the twelve months ending March 31, 1920:

Month	Males	Females	Boys	Girls	Total
April	12	4	1	0	17
May	9	3	1	0	13
June	7	6	0	0	13
July	4	2	2	3	11
August	3	3	3	0	9
September	2	3	1	0	6
October	5	5	2	3	15
November	0	5	2	0	7
December	2	7	1	0	10
January	4	4	1	2	11
February	3	5	1	0	9
March	3	6	1	1	11
Totals	54	53	16	9	132

Of this number 41 were re-admissions, having been in the home at some prior time. This was 4 less re-admissions than the year before, but of the total number of admissions, there were 13 more than of the previous year.

DISCHARGES

Showing the number and sex of adults and minors discharged in each of the twelve months ending March 31, 1920:

Month	Males	Females	Boys	Girls	Total
April	9	3	1	0	13
May	7	3	0	0	10
June	6	5	0	0	11
July	4	1	0	1	6
August	1	2	5	2	10
September	4	3	1	0	8
October	3	5	2	3	13
November	1	4	1	0	6
December	3	3	3	0	9
January	3	5	1	1	10
February	5	1	0	0	6
March	2	6	2	2	12
Totals	48	41	16	9	114

The term "discharge" includes those who die, sent to other institutions, who leave of their own accord or otherwise. There were 32 deaths, 14 were here 1 day or less, 36 less than a week, and 67 less than a month.

Included in the whole number discharged are persons sent to the following institutions:

Municipal Hospital	4
Tuberculosis Camp	2
Worcester State Hospital	6
Psychopathic Hospital	1
State Infirmary, Tewksbury	3
State Board of Charities	8
Baldwinville	1
Brockton City Home	2
Lowell, Chelmsford St. Hospital	1
Total	28

DEATHS

There were 32 deaths, their average age being 67 years, 9 months. Of these, one was an inmate for 41 years, 12 days, another for 22 years, 4 months, 3 days. The average time spent by those who died was 9

years, 9 months, 10 days. One died the same day that she was admitted, and 3 within three days after being admitted. Of these 32 deaths, 5 were buried by the city.

ENTERTAINMENTS

The inmates have been treated to a number of excellent, as well as varied, entertainments. Too much praise cannot be given to the managers of the various film agencies for their cheerfulness in freely loaning their best reels that the old folks may find some enjoyment. Special thanks are due the Famous Players, Lasky Corporation, Art-Craft, and Paramount and Pathé film companies.

To M. Joseph Sully, of the Pathé Exchange, and the Cambridge Lodge of Elks, we are all indebted. Mr. Sully manages and operates all the movies given at the Home. His coming is like a ray of sunshine, and all most heartily welcome him. He cheerfully gives his services free gratis and says he is paid in the happiness given to the old folks.

HARVARD THEATRE

Our citizens should better know big-hearted George Patten, manager of the Harvard Theatre, through whose kindness the inmates of the Home have been admitted every week to the first-class entertainments given at this now noted house of amusement. These found a friend in Manager Patten.

THE MAYOR'S DAY

The big day of the year, with the exception of the Christmas gifts and entertainments, was the Mayor's Day. Mayor Quinn has set aside New Year's Day as the one when the Mayor of the city will call and personally extend to each of our residents his greetings. He supplied extras in the shape of ice cream, candies and tobacco, and closed with the finest entertainment ever given at the Home. We hope this custom, established by Mayor Quinn, will be followed by all the Mayors who succeed him in that office.

VISITATIONS

We have encouraged visitations by our citizens, members of societies and churches, and as a result, many of our inmates who never had visitors call upon them, are now frequently called upon by these

good people, who use some of their time in bringing happiness and oftentimes some delicacies so much enjoyed.

PHONOGRAPH RECORDS

We would appreciate very much if our good citizens, oftentimes tired of hearing the same record over again, would remember that to our old folks these records would be as new ones, if they would only send them to us. A gloomy day could be made cheerful by them.

THANKS

I desire to thank all who in any way helped to brighten the lives of the old folks at the Home, and trust that they will be repaid one hundred fold.

My heartfelt thanks go to the members of the Board of Overseers of the Poor for their good-will, helpful advice, and kind treatment.

The year was made sorrowful by the death of Overseer James F. Mullen, where a big heart was ever beating to help those who needed encouragement and assistance. The inmates lost a friendly visitor, and your Superintendent a true friend.

I appreciate the assistance given to me by the employees of the Department.

Respectfully submitted,

JOHN T. SHEA.

REPORT OF THE BUILDING DEPARTMENT

April 1, 1920.

Hon. Edward W. Quinn, Mayor, Cambridge, Mass.,

Dear Sir:—In accordance with the revised ordinances of this city, I transmit herewith the annual report of the Building Department for the year ending December 31, 1919.

INSPECTION OF BUILDINGS

Number of applications received and permits granted	908
Number of inspections of buildings	3,452
Number of violations	112

INSPECTION OF GAS FITTING

Number of applications received and permits granted	1,425
Number of inspections and tests	2,566
Number of violations	167

INSPECTION OF PLUMBING

Number of applications received and permits granted	347
Number of inspections and tests	1,328
Number of violations	17

INSPECTION OF ELEVATORS

Number of applications received and permits granted	37
Number of inspections and tests	82
Number of violations	85

Respectfully,

JEREMIAH F. DOWNEY,
Superintendent of Public Buildings.

CLASSIFICATION OF BUILDING OPERATIONS BY OCCUPANCY, 1919

	January		February		March		April		May		June		July		August		September		October		November		December	
	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost
Apartments	1	1,000	2	2,100	5	1,825	2	82,000			1	500	1	275	2	6,775	3	1,350	3	165,000	1	1,000		
Churches									1	16,000							1	700						
College, Harvard											2	2,260	1	8,000	1	12,000	4	51,975					1	300
College, Technology									1	30,000			1	500	1	600					1	1,650		
Dwellings, 1 Family			3	525	8	13,075	8	2,275	16	39,775	6	625	9	15,050	12	11,210	7	19,185	9	7,390	4	5,325	5	11,467
Dwellings, 2 Family	5	855	5	1,040	5	440	9	3,090	7	7,920	13	4,055	11	3,165	12	5,850	9	3,200	8	5,905	2	7,050	4	3,310
Dwellings, 3 Family			2	1,000			3	12,700	4	575	3	385	5	13,835	6	2,535	3	500	4	1,150	2	775	1	650
Factories	6	16,075	15	139,635	13	24,060	7	114,490	11	107,590	10	72,975	14	328,540	10	14,075	13	515,900	16	134,750	12	106,630	13	78,046
Garages	2	1,400	7	5,840	15	4,590	21	17,730	19	56,650	18	24,840	16	13,840	19	92,613	18	24,625	24	49,980	10	2,845	5	4,915
Schools													1	15,000	3	1,900	1	1,000			1	1,800		
Stores and Offices	4	3,862	6	9,410	9	7,037	5	1,250	11	11,212	4	620	9	28,370	7	74,475	6	65,075	11	52,190	12	51,975	6	10,025
Storage	3	2,960	3	10,570	3	2,760	8	15,290					3	33,800	5	30,700	2	13,207	5	76,000	4	110,250	6	57,100
Power Plants																	1	3,000					1	325,000
Miscellaneous	1	100	5	2,020	4	2,100	4	1,950	1	5,000	2	500	6	19,900	8	2,385	7	2,875	9	6,030	7	1,900	1	400
Torn Down	4		15		8		3		5		3		14		17		3		10		4		1	
Engines and Boilers	1	100	3	925					1	200	3	1,900	2	1,850	1	200	4	700	5	3,140	1	2,500	3	1,900
Fire Escape							1	150	1	200	1	275												
Elevators					3	7,725	6	15,040	3	6,878	4	9,016	3	10,000	1	160	5	17,500	6	7,297			6	16,300
Totals	27	27,067	66	173,065	73	63,656	79	266,425	81	280,370	70	118,236	95	496,640	105	256,478	88	696,592	110	508,902	61	293,700	53	509,413

CLASSIFICATION OF BUILDING OPERATIONS BY CONSTRUCTION, 1919

	January		February		March		April		May		June		July		August		September		October		November		December	
	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost
New Buildings: 1st class			2	128,000	1	1,180	6	110,495	9	66,450	5	68,550	5	110,425	7	38,300	10	275,000	5	53,850	4	47,450	1	2,200
2nd class					6	18,100	2	71,350	6	46,200	1	18,000	9	220,400	7	150,400	4	77,500	12	353,095	7	169,300	7	383,800
3d class	3	950	10	9,650	20	6,800	20	23,675	16	85,820	8	1,965	19	16,580	11	3,415	18	80,650	22	22,680	11	13,270	7	23,215
Addition and Alteration:																								
1st class	4	6,500	1	3,000	4	21,550	1	150	2	20,000	3	4,065	1	500					6	16,575			1	900
2nd class	9	18,387	12	12,210	5	2,237	10	31,750	5	34,800	12	6,105	15	112,450	13	15,350	16	231,600	10	35,275	13	46,680	11	37,056
3d class	6	1,230	23	20,105	24	5,730	30	19,175	33	19,742	30	8,360	26	24,785	48	48,653	28	13,642	34	16,990	21	14,225	16	44,042
Elevators					3	7,775	6	15,040	3	6,878	4	9,016	3	10,000	1	160	5	17,500	6	7,297			6	16,300
Engines and Boilers	1	100	3	925					1	200	3	1,900	2	1,850	1	200	4	700	5	3,140	1	2,500	3	1,900
Fire Escape					1	700	1	150	1	200	1	275												
Torn Down	4		15		7		3		5		3		15		17		3		10		4		1	
Totals	27	27,067	66	173,065	73	63,656	79	266,465	81	280,370	70	118,236	95	496,640	105	256,478	88	696,592	110	508,902	61	293,700	53	509,413

REPORT OF THE CAMBRIDGE CITY HOSPITAL

April 10, 1920.

To His Honor, the Mayor and the City Council:

The Trustees of the Cambridge City Hospital herewith submit their third annual report, which is for the year beginning April 1st, 1919, and ending March 31st, 1920.

No change has taken place in the Board of Trustees, which is constituted as follows:

Charles S. Cahill, M.D. **Hugh E. McGoldrick**
John H. Hurley **Isaac McLean**
Charles H. Thomas, M.D.

A thoroughly competent surgical staff under the direction of Dr. George F. McIntire, and a medical staff under the direction of Dr. Francis J. Barnes, is at the service of patients at all times.

The high standard of nursing service under the direction of Miss Gertrude D. Stapleton, the Matron, has been maintained during the year. The Hospital Training School offers very desirable courses of instruction to young women who desire to take up nursing as a vocation, and the Matron invites the attention of any such persons to an inquiry into the subject, which will be courteously given.

The first class of pupils to graduate from our school will be awarded diplomas in June, 1920, and pupils will continue to graduate each year thereafter as the qualifications permit.

The Trustees respectively invite a study of the statistics published on another page of this report, which shows the remarkable variety of cases handled, and the volume of business attended to both in the Hospital and the Out-Patient Department.

The Hospital continues to treat cases, in the Out-Patient Department, of city employees who become injured while in the performance of duty, and such persons are given the necessary medical and hospital services free under the provisions of the Workmen's Compensation Act.

The great necessity for additional accommodations at the Hospital being ever present, at the urgent request of the Trustees, the City Council early in the year petitioned the Legislature then in session for au-

thority to borrow the sum of One Hundred and Fifty Thousand ($150,000) Dollars for the purpose of constructing an addition to the present hospital. On March 26, 1919, Chapter 103, Special Acts of the Year 1919, entitled "An act to authorize the City of Cambridge to incur indebtedness for the construction of an addition to its City Hospital," was approved. Immediately upon the passage of this legislation, the Trustees requested of the Mayor and City Council that the sum of One Hundred and Fifty Thousand ($150,000) Dollars thus authorized be made available. On July 3rd, 1919, notice was received that this appropriation had been approved as requested. Plans were then prepared by the architect and proposals for general construction and heating and ventilating were advertised for and opened, October 14, 1919.

The prices of materials and supplies had continued to advance so rapidly covering the period from the early Spring until the Fall, it was discovered that the aggregate of the lowest bids received was in excess of the appropriation. The matter of redrawing the plans, cutting out certain parts, was given serious consideration. The Trustees were unanimous in the opinion that this would be inadvisable. Therefore, at a meeting held on October 20, 1919, it was voted to request of the Mayor and City Council a further appropriation so that the work as originally planned might be carried out. On January 28, 1920, no additional appropriation having been provided, all proposals received in October were rejected. At this time, another communication was forwarded to the Mayor and City Council renewing the request for additional appropriation, so that we might proceed with the necessary work at once. We are assured that this request will be complied with in the near future.

His Honor the Mayor and the members of the City Council have been very patient with us in our persistent requests which have been made upon them from time to time, and we gladly acknowledge and thank them for their helpful co-operation, which after all is wholly in the interest of those in the community who may become afflicted by accident or sickness.

The following is a brief statement of expenditures and receipts of the Hospital for the year:

Salaries	$24,908.31
Advertising and printing	6.60
Transportation of persons	25.00
Cartage and freight	63.94

Light and power	4,323.03	
Communication	411.71	
Cleaning	276.58	
Medical service	133.00	
Examinations	20.00	
Boiler inspection	10.00	
Electrical equipment	277.25	
General Plant	130.27	
Furniture and fittings	172.75	
Medical and surgical equipment	186.20	
Wearing apparel	90.55	
General Plant (equipment)	89.62	
Office supplies	411.72	
Food and ice	16,587.95	
Fuel	4,412.02	
Medical and surgical supplies	6,482.21	
Laundry supplies	721.09	
Agricultural supplies	1.71	
General supplies	1,908.31	
		$62,009.82
Received from patients, April 1, 1919, to March 31, 1920		17,154.90
Collected by Overseers of the Poor Department for care of patients at Hospital		1,740.50
Total receipts		$18,895.40

STATISTICS FROM APRIL 1, 1919, TO MARCH 31, 1920.

Patients remaining in Hospital April 1, 1919	38
Patients remaining in Hospital April 1, 1920	60
Total number of patients admitted	1,242
Largest number of patients in any one day	68
Smallest number of patients in any one day	26
Daily average	48
Number of surgical cases treated	548
Number of medical cases treated	436
Number of obstetrical cases treated	118
Number of aural cases treated	140
Number of cases treated in accident room	565

ADMISSIONS AND THEIR CLASSIFICATIONS

April 1, 1919, to March 31, 1920.

Cardio Vascular System:		Cerebral hemorrhage	7
Arterio sclerosis with embolism	1	Chronic endocarditis	1
Arterio sclerosis with cerebral hemorrhage	2	Myocarditis	3
Arterio sclerosis	1	Myocarditis with broncho pneumonia	1
Arterio sclerosis		Myocarditis with aortic aneurism	1
Gangrene of toe	1	Cardiac insufficiency	3
Angina pectoris	1	Pericarditis with pleurisy with effusion	1
Myocarditis	4	Aortic stenosis—mitral regurgitation	2
Mitral regurgitation	1		
Cerebral embolism	1		

Aortic regurgitation—myocarditis	1
Heamoptysis	1
Secondary anemia	1
Cardiac syncope	4
Urinary System:	
Cardio renal	1
Acute nephritis	2
Bright's disease	2
Uremia	1
Stone in kidney	1
Acute retention of urine	1
Stone in ureter	1
Renal calculus	2
Papiloma of bladder	1
Hydronephrosis	1
Diabetes Mellitis	4
Diabetes Acidosis	2
Diabetes gangrene—amputation of leg	1
Kidney abscess	1
Periniphritic abscess	1
Acute choleocystitis	2
Pyelitis	1
Cystitis	1
Genito Urinary System:	
Hypertrophied prostate	4
Variococele	3
Hydrocele	1
Undescended testicle	1
Phimosis	6
Epididymitis	4
Circumsion	3
Obstetrical:	
Pregnancies	118
Eclampsia	1
Caesarian sections	3
Placenta Praevia	1
Influenza with pregnancy	1
Vomiting pregnancy	1
Toxemia	1
Deliveries	107
Still born	9
Premature	3
Puerperal insanity	1
Gynaecological:	
Tubal pregnancy	5
Tubal pregnancy ruptured	1
V. V. Abscess	2
Fibroid uterus	6
Ovarian cyst	2
Miscarriage	28
Prolapse of uterus	2
Retroversion of uterus	2
Rectocele—cystocele	2
Perineorrhaphy	1
Septisaemia from self-induced abortion	1
Pelvic abscess	1
Endometrititis	8
Salpingitis	9
Intestines:	
Acute appendix	33
Chronic appendix	12
Appendix abscess	4
Ruptured appendix	6
Colitis	1
Inguinal hernia	16
Femoral hernia	1
Umbilical hernia	2
Ventral hernia	1
Strangulated hernia	5
Intestinal obstruction	6
Perforated ulcer ilium	1
Acute gall bladder	3
Abscess of liver	1
Catarrhal jaundice	1
Intersusception	1
Intestinal hemorrhage	1
T. B. Peritonitis	2
Oeoforated duodenal ulcer	1
Gastric ulcer	4
Hemorrhoids	2
Hemorrhoids with morphinism	1
Fistula in ano	3
Ischio rectal abscess	5
Acute gastritis	7
Acute enteritis	1
Gastro enteritis	1
Constipation	5
Tuberculosis:	
Pulmonary tuberculosis	3
T. B. Spine	3
T. B. Hip	2
T. B. Glands of Neck	1
T. B. Anthritis	1
T. B. Elbow	1
T. B. Knee	1
T. B. Meningitis	2
Respiratory:	
Lobar pneumonia	52
Broncho-pneumonia	36
Bronchitis	11
Influenza	17
Pleurisy	1
Asthma	1
Coryza	1
Tonsilitis with bronchitis	1
Empyema	1
Neoplasms:	
Sebaceous cyst	1
Carcinoma of stomach	4
Carcinoma of rectum	2
Carcinoma of breast	5
Carcinoma of colon	3
Carcinoma of pylorus	1

Carcinoma of sigmoid	1
Carcinoma of liver	1
Carcinoma of bladder	1
Carcinoma of neck	1
Carcinoma of lip	1
General carcinoma	1
Goitre	2
Abscesses:	
Abscess of breast	7
Abscess of face	1
Abscess of buttocks	1
Abscess of neck	5
Abscess of knee	1
Abscess of leg	4
Abscess of axilla	1
Alveolar abscess	4
Cervical adenitis	5
Septic Wounds:	
Furunculosis	4
Varicose ulcer	3
Septic foot	3
Septic hand	9
Septic wound of lip	1
General septicemia	2
General septicemia septic scalp	1
Septic arm	1
Septic wrist	1
Neurosis:	
Epilepsy	4
Hysteria	8
Chorea	2
Shell shock	1
Exposure	1
Idiocy	1
Marasmus	2
Neurasthenia	8
Aural:	
Naso pharyngitis	1
Tonsils and adenoids	141
Peritonsillar abscess	2
Streptococcus throat	2
Cervical adenitis with radical mastoid	1
Deviated septum	5
Nasal polipi	1
Frontal sinus	2
Salivary calculus	1
Polypoid degeneration of middle turbinates and ethmoids	1
Mastoiditis	1
Chronic otitis media	1
Burns:	
Abdomen	3
Conjunctiva	1
Chest	1
Leg	1
Multiple	3
Poisoning:	
Gas poisoning	5
Alcohol poisoning	2
Iodine poisoning	1
Corrosive poisoning	2
Lead poisoning	1
Asphyxiation smoke	3
General Diseases:	
Spinal meningitis	2
Meningitis septicemia	1
Typhoid	7
Acute alcoholism	10
Morphinism	2
Malnutrition with general sepsis	1
Splenic anemia	1
Unclassified:	
Heat prostration	1
Attempted suicide	1
Stab wounds	2
Carbuncle of back	2
Osseous System:	
Fractures:	
Skull	17
Humerus	6
Oscalsis	1
Colles	2
Femur	19
Dislocation	1
Fibula	7
Tibia	7
Both bones leg	13
Patella	3
Both bones arm	6
Ribs	7
Metatarsal	3
Mecalarpal	1
Malleolus	2
Radius	3
Jaw	2
Ulna	1
Astragulus	2
Clavicle	3
Elbow	2
Scapula	1
Pelvis	4
Phalanges	1
Phalanges with amputation	3
Nasal	4
Dislocations:	
Hip	1
Ankle	1
Thumb	1
Bullet wounds	3
Contusions and abrasions	48
Lacerated wounds	28
Punctured wounds	4
Sprains	11

Periostitis	2
Sequestrum of humerus	1
Foreign body in arm	1
Foreign body in foot	1
Synovitis of knee	1
Osteomyelitis of femur	4
Osteomyelitis of humerus	1
Osteomyelitis of tibia	
Deaths	
Cardiac	2
Cerebral embolus	2
Cerebral hemorrhage	2
Arterio sclerosis with myocarditis	2
Arterio sclerosis with angina pectoris	1
Aortic regurgitation	1
Aortic stenosis with mitral regurgitation	2
Malnutrition with general sepsis	1
Uremia	1
Diabetes	1
Diabetes acidosis	2
Diabetes gangrene	1
Osteomyelitis femur	1
T. B. Meningitis	2
Meningitis septicemia	1
Gas poisoning	2
Corrosive poisoning	1
Typhoid	1
Acute enteritis	1
Carcinoma of stomach	2
General septicemia	3
Carcinoma of sigmoid	1
Carcinoma of liver	1
General carcinoma	1
Carbuncle of back	1
Miscarriage	1
Acute salpingitis	1
Appendix abscess	1
Strangulated hernia	3
Broncho pneumonia	13
Lobar pneumonia	18

CLASSIFICATION OF OPERATIONS

April 1, 1919, to March 31, 1920

Abdominal	
Appendectomies:	
Acute	41
Ruptured	13
Chronic	12
Gangrenous	4
Retro-Cecal	3
Sub acute	1
Interval	2
Caesarean section	6
Hysterectomies:	
Abdominal	11
Pan Abdominal	2
Vaginal	5
General Peritonitis	1
Exploratory laparotomies	7
Abscesses:	
Breast	5
Liver	2
Peri-nephritic	3
Pelvis	7
Axilla	1
Cervical	7
Inguinal	1
Alveolar	8
Peri-Tonsillar	2
Ischio-Rectal	3
Thigh	1
Septic hand	1
Septic finger	2
Varicose veins	1
Epithelioma face	3
Mastoiditis	3
Mastoiditis Radical	1
Femur bone plates	2
Tibia bone plates	2
Humerus bone plates	2
Bone bands	2
Circumcisions	9
Tendon transplantation	1
Empyema	5
Epididymitis	1
Deviated septum	12
Breast tumor	2
Breast amputation	9
Sub maxillary tumor	1
Traumatic Amputation arm	1
Hydrocele	2
Plastic on nose	1
Septic compound fracture	1
Amputation of arm	1
Amputation of fingers	1
Bullet in foot	1
Recto vaginal fistula	1
Ischio rectal fistula	3
Varicose veins	2
Hydrocele cord	1
Skin graft	1
Amputation of leg	3
Hemorrhoids	6
Gastro enterostomies	7
Resection ilium with anastomosis	1

Uterine Suspensions:	
Uterine Gilliam	2
Uterine Ventral	1
Cholecystectomy	10
Cholecystotomy	2
Colostomy	3
Perforated gastric ulcer	1
Intussusception	1
Resection Ilium	1
Nephrectomies	2
Nephrorraphy	1
Supra pubic cystotomy	1
Intestinal obstruction	2
Lanes-Kink	2
Variocele	2
Supra pubic prostatectomy	3
Ovarian cysts	3
Salpingectomies	5
Salpingo-oophrectomy	2
Ovariotomy	1
Extra Uterine pregnancy	6
Hernias:	
Congenital	4
Double inguinal	1
Femoral	3
Right inguinal	13
Left inguinal	8
Strangulated	4
Incarcerated	3
Scrotal	2
Ventral	2
Post operative	3
Umbilical	2
Osteomyelitis femur	2
Osteomyelitis Ulna	1
Osteomyelitis Pelvis	1
Osteomyelitis Tibia	1
Carbuncle neck	1
Carbuncle shoulder	2
Varicocele	2
Eye enucleation	1
Subaceous cyst neck	1
Rectocele	1
Cystocele	3
Transfusion	2
Urethral stricture	1
Ethmoiditis	2
Sinusitis	2
Keloid	1
Branchial cyst	1
Patellar suture	1
Open reduction colles fracture	1
Diverticulum	1
Pre-patellar bursa	1
Pre-patellar septic	1
Miscarriage	18
Abortion	6
Thyroidectomy	3
Endometritis	5
Adnectomy	2
Compound fracture tibia	1
Carcinoma bladder	1
Trachelorraphy-permineorraphy	5
Frontal sinua	1
Tonsils and adenoids	381

X-RAY DEPARTMENT

To the Trustees of the Cambridge City Hospital:

During the hospital year, April 1919-1920, five hundred and sixty-eights patients were examined, which included examinations of the head, chest, gastro-intestinal tract, genito-urinary tract and extremeties. Originally, it was thought that Roentgen examinations could be adequately taken care of three mornings per week, but because of the increase in amount of casualty surgery and the desirability of these cases and others being examined at once, the Roentgen laboratory was opened for daily work. This necessitated putting the technical work in charge of someone resident in the hospital. Miss Gertrude Granfield, R. N., was designated by the Superintendent to take up this work and she was trained by the visiting Roentgenologist. Her technical services have been highly satisfactory and have added much to the efficiency of the X-ray department. The amount of X-ray work is daily increasing, so that it has now been arranged that the visiting Roentgenologist will

visit the hospital each day, that cases may be diagnosed on the same day that the technical work is done.

Thus far very little X-ray therapy has been attempted, but it is hoped that upon going into the promised new and enlarged quarters in the new hospital wing that more X-ray therapy will be done. There are many conditions where X-ray therapy seems to beget better therapeutic results when used in combination with radium. It is hoped that the hospital trustees will be able to acquire an amount of radium sufficient for all kinds of treatments upon going into the new hospital wing, where it is expected that we shall have more of the kind of cases that demand X-ray and radium treatments.

At the present market price radium is selling at $120.00 per milligram. One hundred milligrams is quite the smallest amount that can be used for all kinds of conditions. An advance in the market price of this precious substance is expected within the next six months and it might be worth while to give serious attention to its purchase at this time.

In the new wing it is proposed that the X-ray department shall have a special treatment room, with adequate protection to patient and operator as well as an X-ray fluroscopic room and radiographic room. At present it is the custom to give an undergraduate nurse a two-months' course in the X-ray department, where she learns the technique of loading and developing films, the method of giving opaque meals and enemata as well as the first principles of care of a patient in the presence of high-tension wiring such as exists in all modern X-ray departments. Later on it is hoped that someone of the graduating nurses will desire to take up X-ray laboratory work as her specialized field, when at such time she will be taught the principles of X-ray and radium therapy.

The X-ray department has met with the hearty co-operation of the trustees, who have very generously purchased all supplies without stint; of the Superintendent, who has provided nursing attendants even to the extent of foregoing her own assistant, so that the X-ray department might properly function; and to the staff for their splendid broad-mindedness in accepting the deficiencies as well as the excellencies of the department.

Respectfully submitted,

FREDERICK W. O'BRIEN,

Visiting Roentgenologist.

OUT-PATIENT DEPARTMENT

Medical and surgical clinics are held every morning from 9 to 11 A. M. except Sundays and Holidays.

Medical Service		Surgical Service	
Male	180	Male	444
Female	177	Female	207
Total	357	Total	651

Aural Clinic is held at Out-Patient Department every Monday morning, at which time cases are seen and referred to the house for operation on Tuesday mornnig. The Aural Clinic is growing all the time, the highest number of cases of Tonsils and Adenoids operated upon in one day being thirty-one.

Aural Service		Opthalmic Service	
Male	90	Male	47
Female	82	Female	64
Total	172	Total	111

Opthalmic clinic is held every Wednesday morning.

Orthopedic clinic was started in Out-Patient Department on September 9, 1919, in charge of Dr. Bernard A. Godvin. Up to the time of the present report one hundred and twenty-seven patients have been admitted to this clinic, receiving treatments consisting of massage, baking and proper appliances correcting various deformities.

Number of treatments given in massage department..... 656

ORTHOPEDIC SERVICE

Arthritis	7	Sacro iliac strain	7
Arthritis Hypertrophic	6	Lumbo sacro strain	1
Bursitis	4	Synovitis	2
Feet, flat	11	T. B. Spine	2
Feet, weak	16	Hypertrophic Anthritis spine	4
Fractures, upper extremities	16	Contracted tendon Achilles	1
Fractures, lower extremities	15	Spurs of oscalsis	3
Infantile Paralysis	1	Contracted band oscalsis	1
Osteomyelitis	1	Deferred	8
Periostitis	1	Miscellaneous	12
Postural	3	New cases	127
Scoliosis	3		

Respectfully submitted,

CHARLES S. CAHILL, M. D., Chairman.
JOHN H. HURLEY
ISAAC McLEAN
HUGH E. McGOLDRICK
CHARLES H. THOMAS, M. D.

REPORT OF THE BOARD OF HEALTH

January 1, 1920.

To the Honorable, the City Council of the City of Cambridge, Mass.:

In compliance with the Revised Laws, Chapter 75, Section 11, the Board of Health submits herewith its annual report for the year ending December 31, 1919.

This year has been an extremely interesting and unsettled one in this Department, probably due to post-war conditions, as a result of which the city and this department have lost the services of several of their most efficient personnel.

From the public health standpoint, the year has proven to be very encouraging, as shown by the annexed matter on diseases dangerous to the public health, and vital statistics. The dreaded influenza which visited us in 1918, and which was expected during this year, did not manifest itself. The department was prepared for a recurrence, and had personnel and equipment ready, with arrangements completed, to enable it to put an emergency hospital in operation within twenty-four hours. The total number of deaths, although larger than in some previous years, was not so great when the number of deaths from influenza, a small second wave of the first outbreak coming in January, is considered.

The department has been fortunate in having had provision made for the employment of two additional school nurses and an office stenographer. This is an encouragement.

During the summer, after many conferences between this Board and the Cambridge Red Cross, one physician and three nurses from the Red Cross were assigned this department to make a survey of health conditions amongst the public school children, and the methods used in the routine medical school inspection (for detailed report see annexed report on School Inspection).

Dr. Bradford H. Peirce, who was in the service of the United States Navy during the war, returned to his position as Medical Inspector for the Board, and, after much hesitation, resigned on July 1st to take charge, as superintendent, of the new Plymouth County

Tuberculosis Hospital in South Hanson, Mass. In the change of Dr. Peirce, this city sustains a great loss, as he had been the Medical Inspector for the Board of Health for ten years, and was thoroughly conversant with the health problems and needs of our city, and had attained the reputation as an authority in public health work.

Miss Martha D. Woodworth, head school nurse, who has been in the department for ten years, resigned to accept a better paying position as matron of the Plymouth County Hospital; again the city loses a most efficient and progressive worker.

During the year, a great many of the personnel who had left to enter war service returned and are performing their former duties.

John D. Crowley, the clerk of the board, who entered the service of the United States Navy the day war was declared, returned on June 1st, after twenty-six months' active service. On April 1st, Miss Mary Kenney, one of the first infant nurses in the department, returned after service as an over-seas army nurse. Miss Nelson and Miss Bears, who went over-seas as Red Cross nurses, resigned their positions, to accept more advanced appointments in Louisville, Kentucky. John A. McCormick, plumbing inspector, who has been employed in the department since February 1st, 1895, and who has served actively and continuously since that time, was retired on February 10th, 1919. The board wishes to take this opportunity of publicly expressing its appreciation of Mr. McCormick's faithful and efficient services in the numerous hazardous tasks which his duty called upon him to perform. Miss Kittie L. Magoun, who came to the department from the Assessors' Office in 1908, left in June to become Secretary to the Board of License Commissioners.

Joseph M. Wadden, M.D., who assisted Dr. Peirce during the war, has been acting as Medical Adviser since the resignation of Dr. Peirce.

The Board appreciates the necessity for retrenchment, and endeavors to run its continually increasing fields of work with the greatest economy possible. We feel, however, that the need of additional public health nurses and school dentists is more urgent than ever before, and it is to be regretted that, after training our personnel, we are obliged to lose it through inability to cope with other cities in the problem of compensation, and it is hoped the proper authorities will seriously consider this pressing handicap under which we are working.

For some years past the Board has been in touch with public

opinion relative to reasonable measures to protect food products, and, in the absence of a specific state law, the following regulation was adopted, after the prescribed public hearing:

Adopted October 6, 1919. Article 137.

"No person, or firm, shall keep or expose for sale, in any shop or store, on any sidewalk or street, or other place in this city, any candy, baker's product, or other edible food-stuff, unless so covered with clean material as to be protected from dust, flies, and other means of contamination."

Attention is called to the reports of the various sub-divisions of the department which follow.

In closing, the Board feels it would be remiss in its duty if it did not, as a whole, extend its thanks to the employees of the department for their loyal co-operation, and their continued conscientious labors. It also wishes to express its appreciation to all the civic organizations which have in any way aided in protecting the public health.

Respectfully submitted,

ELIE H. LAPIERRE, *Chairman,*
HARRIE M. GARDNER, M.D.,
JEREMIAH S. SULLIVAN,
Board of Health.

EXPENDITURES

Expended for Salaries
January 1—December 31, 1919

Medical Inspector	$2,748.52	
Bacteriologist	1,080.00	
Clerk	996.05	
Secretary	1,053.15	
Social Worker	806.15	
Stenographer	800.57	
Temporary Clerk	96.43	
Inspector of Provisions	2,143.19	
Sanitary Inspectors	6,026.45	
Plumber	499.42	
Driver	1,345.37	
School Nurses	5,503.57	
School Physicians	2,549.99	
Infant Welfare Nurses	1,427.58	
Culture Collector	162.00	
Inspector of Slaughtering	780.00	
Dispensary Physician	504.00	
Dispensary Nurse	955.56	$29,478.00

Expended for General Expenses
January 1—December 31, 1919

Board and care:		
Cerebro-spinal Meningitis	$ 1.75	
Diphtheria	2,549.00	
Measles	12.25	
Ophthalmia Neonatorum	52.87	
Scarlet Fever	4,702.50	
Tuberculosis	593.47	$7,911.84
Reimbursement of other cities and towns, and of the Commonwealth:		
Cerebro-spinal Meningitis	$ 46.50	
Diphtheria	138.14	
Measles	36.00	
Ophthalmia Neonatorum	141.42	
Scarlet Fever	247.64	
Tuberculosis	926.44	$1,536.14
Printing and Binding	95.81	
Postage	123.60	
Advertising and Posting	44.34	
Transportation of Persons	1,606.29	
Cartage and Freight	2.70	
Rent, Taxes and Water	109.76	
Communication	73.99	
Motor Vehicle Repairs and Care	160.15	
Care of Persons	9,448.98	
Removal of Ashes, Dirt and Garbage	1.75	
Fees, Service of Venires, etc.	18.80	
Office	608.71	
Food and Ice	67.43	
Medical, Surgical and Laboratory	411.67	
Motor Vehicle	259.32	

Chemical and Disinfectants	104.12	
General Plant	39.60	
Pensions and Annuities	499.42	$23,124.42

Expended for Tuberculosis Hospital
January 1—December 31, 1919

Salaries:		
Physician	$1,200.00	
Interne	505.21	
Matron	1,077.04	
Supervisor	780.00	
Nurses	4,093.90	
Cook	700.00	
Assistant Cook	416.00	
Dishwashers	742.00	
Laundresses	972.00	
Maids	728.00	
Scrubwomen	848.00	
Engineer	1,560.00	
Firemen	3,970.50	
Caretaker	780.00	
Assistant Caretaker	377.00	$18,749.65
Postage	40.00	
Cartage and Freight	19.40	
Light and Power	114.97	
Communication	101.09	
Medical	30.00	
Extermination of Insects	1.60	
General Plant Equipment	3,054.86	
Furniture and Fittings	147.83	
Office	38.14	
Food and Ice	23,768.68	
Fuel	6,335.25	
Medical, Surgical and Laboratory	1,393.00	
Laundry, Cleaning and Toilet	200.12	
Agricultural	24.74	
Chemical and Disinfectants	35.28	
General Plant Supplies	2,242.84	$56,297.45

Expended for Inspection of Milk and Vinegar
January 1—December 31, 1919

Salaries:		
Inspector	$1,200.00	
Collector of Samples	1,396.19	$ 2,596.19
Postage	8.00	
Transportation of Persons	116.00	
Cartage and Freight	.82	
Testing Materials and Supplies	3.70	
Fees, Services of Venires, etc.	22.00	
Motor Vehicle Equipment	559.05	
Office	44.50	
Medical, Surgical, Laboratory Supplies	168.21	
Laundry, Cleaning, Toilet	16.11	
Motor Vehicle Supplies	195.81	$ 3,730.39

EXPENDED FOR DENTAL CLINIC
January 1—December 31, 1919

Salaries:			
Dentist	$975.00		
Assistant	377.00	$ 1,352.00	
Office		10.29	
Medical, Surgical and Laboratory Supplies		76.70	$ 1,438.99

BOARD OF HEALTH RECEIPTS—JANUARY 1-DECEMBER 31, 1919

Contagious Diseases (Including All but Tuberculosis)

State	$ 758.71		
Cities and Towns	893.75		
Individuals	974.57	$ 2,627.03	

Tuberculosis

State	$ 2,547.91		
Cities and Towns	16,052.19		
Individuals	2,079.03		
Subsidy	9,746.78	30,425.91	$33,052.94

MARY A. CRANE,
Secretary.

VITAL STATISTICS

DEATH RATE PER 1,000 LIVING FROM ALL CAUSES

POPULATION 112,169

1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
15.01	15.30	13.40	13.69	13.42	13.39	13.94	14.52	17.99	13.14
15.41	16.09	14.25	14.40	14.04	14.12	14.59	14.63	20.55	12.24

As in the past few years, the table of death rates above has been computed from two sets of statistics. The lower row of death rates is that obtained by including in the number of deaths those of Cambridge residents who died outside of Cambridge and excluding deaths in the city of non-residents. The upper row is obtained from the actual number of deaths in the city, includes deaths of non-residents and excludes deaths of Cambridge citizens when they did not occur in the city.

The figures given for the population are estimated by the method adopted by the Bureau of the Census, and given as Method V on page 9 of Bulletin No. 109, by using the figures of the Massachusetts census of 1915 and the United States census of 1910.

Male death rate for 1919	13.46	12.29
Female death rate for 1919	13.05	12.03
Mean annual death rate for the ten years 1910 to 1919, inc...	14.36	14.53

In this table the first column of figures is derived from the total number of deaths in the city, the second by excluding non-residents and including residents of Cambridge who died outside the city.

Table A gives the causes of deaths by ages in accordance with the International Classification of Causes of Deaths, of those persons only who died in Cambridge, and includes non-residents.

Table B gives the number of cases reported, the morbidity per 1,000 living, the death rate per 1,000 living, including residents who died outside of Cambridge and the death rate per 100 cases reported of diphtheria, scarlet fever, measles and typhoid fever for the years 1910 to 1919, inclusive. If the death rate per 1,000 living, computed from deaths in the city only, varies from that given in the table, the fact is stated in a footnote.

JOSEPH M. WADDEN, M.D.,

(*Acting*) *Medical Adviser.*

TABLE A

CAUSES OF DEATH	Under 1		1 to 2		2 to 3		3 to 4		4 to 5		Total Under 5		5 to 10		10 to 15		15 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		Over 90		Total Over 5		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
I. General Diseases																																			
1. Typhoid Fever																	1						1										2		2
2. Exanthematous Typhus																																			
3. Relapsing Fever																																			
4. Malarial Fever																																			
5. Smallpox																																			
6. Measles			1		1						1	1																							
7. Scarlet Fever																																			2
8. Whooping Cough	2	3	2	4		1		1			4	9																							
9. Diphtheria										1		1	1	1	1																				13
9a. Croup																																	2	1	4
10. Influenza	3		2		3	3	1				9	3	1	2	1	1	1	2	8	10	5	6	2	5	3	2	5	1	1	2		1			
11. Miliary Fever																																	27	32	71
12. Asiatic Cholera																																			
13. Cholera Nostras																																			
14. Dysentery																																			
15. Plague																																			
16. Yellow Fever																																			
17 Leprosy																																			
18. Erysipelas																																			
19. Other epidemic diseases																							1	1	1	1					1		3	2	5
20. Septicemia (and purulent infection)													1						1	1							1						3	1	4
21. Glanders and Farcy																																			
22. Anthrax (malignant pustule)																																			
23. Rabies																																			
24. Tetanus																								1										1	1
25. Mycoses																																			
26. Pellagra																																			
27. Beriberi																																			
28. Tuberculosis of the Lungs													1			4	6	7	18	29	25	12	27	16	14	1	7	4	4	1			102	74	176
29. Acute Miliary Tuberculosis																									1								1		1
30. Tuberculous Meningitis	1	1	1	1							2	2		1				1			1												1	2	7
31. Abdominal Tuberculosis																					1	1											1	1	2
32. Pott's Disease																																			
33. White Swelling																																			
34. Tuberculosis of other organs							1				1								1					1	1								2	1	4
35. Disseminated Tuberculosis																						1	1										1	1	2

TABLE A—(Continued)

CAUSES OF DEATH	Under 1		1 to 2		2 to 3		3 to 4		4 to 5		Total Under 5		5 to 10		10 to 15		15 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		Over 90		Total Over 5		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
I. General Diseases (Continued)																																			
35a. Scrofula	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
36. Rickets	2	...	1	1	...	...	...	...	...	...	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
37. Syphilis	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	3	...	4
38. Gonococcus Infection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
39. Cancer (or Malignant Tumor) of Mouth	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	3	...	3	...	3	...	2	...	...	...	11	1	12
40. Cancer of Stomach and Liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	3	1	4	5	6	1	1	9	2	1	...	...	18	19	37
41. Cancer of Intestines and Peritoneum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	1	6	4	3	3	...	2	...	1	...	...	11	12	23
42. Cancer of Female Genital Organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	5	...	4	...	3	...	5	...	...	...	...	...	18	18
43. Cancer of Breast	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	7	...	3	...	4	...	...	...	...	...	17	17
44. Cancer of Skin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	3	1	...	2	2	...	...	...	1	...	7	3	10
45. Cancer of Other Organs	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	1	...	2	3	1	2	4	1	8	1	2	1	...	1	...	...	18	9	28
46. Tumor (non-malignant and excepting those of female genital organs)	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
47. Acute Articular Rheumatism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	1	1	2
48. Chronic Rheumatism and Gout	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
49. Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
50. Diabetes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
51. Exophthalmic Goitre	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	2	2	...	...	1	7	4	3	...	1	...	1	7	17	24
52. Addison's Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	2
53. Leukemia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	....
54. Anemia, Chlorosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	1	2	...	...	...	...	...	...	1	...	1
55. Other general diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2	4	6
56 Alcoholism (acute or chronic)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	1
57. Chronic Lead Poisoning	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
58. Other chronic occupation poisonings	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
59. Other chronic poisonings	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
II. Diseases of the Nervous System and Other Organs of Special Sense																																			
60. Encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	1	1	2
61. Meningitis, simple	...	1	...	...	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	2
61a. Meningitis, Epidemic Cerebro Spinal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	3
62. Locomotor Ataxia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	2	1	1	...	1	1	...	...	1	1	2
63. Other Diseases of the Spinal Cord	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	5	3	8
63a. Acute Anterior Polio-Myelitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	4

TABLE A—(Continued)

CAUSES OF DEATH	Under 1		1 to 2		2 to 3		3 to 4		4 to 5		Total Under 5		5 to 10		10 to 15		15 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		Over 90		Total Over 5		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
II. Diseases of the Nervous System (Continued)																																			
64. Apoplexy, and Cerebral Hemorrhage	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	1	...	2	4	8	17	15	21	11	22	6	13	..	...	43	77	120
65. Softening of the Brain	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	...	...	....
66. Paralysis (undefined)	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	1	1	..	..	..	..	1	1	2
67. General Paralysis of the Insane	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	1	...	...	...	...	...	...	1	...	..	4	..	..	..	..	1	5	6
68. Other forms of Mental Alienation	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	...	...	....
69. Epilepsy	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	...	...	...	1	...	..	...	..	..	..	...	1	...	1
70. Convulsions (non-puerperal)	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	..	...	..	..	..	...	...	...	....
71. Convulsions of Children	2	2	1	..	..	..	..	..	..	..	3	2	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	..	...	..	..	..	...	...	...	5
72. Chorea	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	..	...	..	..	..	...	...	...	....
73. Neuralgia and Neuritis	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	1	..	...	..	..	..	...	...	1	1
74. Other Diseases of Nervous System	1	...	..	..	..	..	..	..	..	..	1	...	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	..	...	..	..	..	...	...	...	1
75. Diseases of the Eye and its Adnexa	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	..	...	..	..	..	...	...	...	....
76. Diseases of the Ear	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	1	..	...	..	..	..	...	...	1	1
III. Diseases of the Circulatory System																																					
77. Pericarditis	...	...	..	..	..	..	..	..	..	..	...	...	1	..	..	..	..	..	...	...	...	...	...	..	1	...	...	...	..	...	..	..	..	...	2	...	2
78. Endocarditis, Acute	1	...	..	..	..	..	..	..	..	..	1	...	..	..	1	1	..	..	...	...	...	...	...	1	...	...	...	...	..	1	..	..	..	...	1	3	5
79. Organic Diseases of Heart	...	2	..	..	..	..	..	..	..	..	...	2	1	2	2	1	2	..	2	3	3	7	14	11	28	19	19	22	28	21	8	14	1	3	108	103	213
80. Angina Pectoris	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	1	...	...	..	2	...	1	2	1	3	..	..	..	...	5	5	10
81. Diseases of Arteries	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	1	...	..	3	2	9	8	12	14	10	13	1	2	35	40	75
82. Embolism and Thrombosis	...	...	..	..	1	..	..	..	..	..	1	...	..	..	..	..	..	..	...	...	...	1	...	1	1	1	...	...	1	...	..	..	..	...	2	3	6
83. Diseases of Veins	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
84. Diseases of Lymphatic System	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
85. Hemorrhages (except of lungs). Other Diseases of Circulatory System	1	...	..	..	..	..	..	..	..	..	1	...	..	..	..	..	1	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	1	2	
IV. Diseases of the Respiratory System (Except Tuberculosis)																																					
86. Diseases of Nasal Fossae	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	1	...	..	...	...	..	...	..	...	..	..	..	...	...	1	1
87. Diseases of the Larynx	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
88. Diseases of the Thyroid Body	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
89. Acute Bronchitis	1	...	1	2	..	..	..	..	..	..	2	2	..	..	..	..	..	1	...	...	...	...	...	..	...	...	...	2	..	1	..	2	..	...	6	10	
90. Chronic Bronchitis	1	...	..	..	..	..	..	..	..	..	1	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	2	2	1	..	1	2	4	7
91. Broncho-Pneumonia	13	11	3	3	3	2	1	1	..	..	20	17	..	..	..	..	1	1	2	1	2	...	1	2	2	1	4	3	2	7	..	4	..	1	14	20	71

TABLE A—(Continued)

CAUSES OF DEATH	Under 1		1 to		2 to		3 to 4		4 to 5		Total Under 5		5 to 10		10 to 15		15 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		Over 90		Total Over 5		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
IV. Diseases of the Respiratory System (Continued)																																			
92. Pneumonia	2	1	1	..	2	..	..	1	..	..	5	2	..	1	..	..	..	3	4	3	4	7	3	3	3	5	5	4	5	7	..	..	..	..	24	33	64
93. Pleurisy	...	1	1	1	..	1	..	..	..	..	1	3	..	..	..	..	..	..	...	...	...	...	...	..	1	1	1	1	..	...	..	..	..	...	2	2	8
94. Congestion of Lungs and Pulm. Apoplexy	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
95. Gangrene of Lungs	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
96. Asthma	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	1	..	...	...	...	...	..	...	..	..	..	...	1	...	1
97. Emphysema	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
98. Hemorrhage and other diseases of resp. system (except Phthisis)	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	1	...	...	...	...	..	...	..	..	..	...	...	1	1
V. Diseases of the Digestive System																																			
99. Diseases of the Mouth and Adnexa	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
100. Tonsilitis and dis. of the Pharnyx	...	...	..	..	..	..	..	..	..	..	...	...	..	2	1	..	..	..	1	1	...	...	...	..	...	...	...	...	..	...	..	..	..	...	2	3	5
101. Diseases of the Esophagus	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
102. Ulcer of Stomach	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	1	...	...	1	...	...	...	...	..	1	1	..	..	...	2	2	4
103. Gastritis and other dis. of Stomach	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
104. Diarrhea and Enteritis (under 2 years)	20	12	..	1	..	..	..	..	..	..	20	13	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	33
105. Diarrhea and Enteritis (2 years and over)	...	...	..	..	..	2	..	..	..	..	...	2	..	..	..	..	..	..	...	...	...	...	2	..	1	...	...	1	..	...	..	..	..	...	3	1	6
106. Ankylostomiasis	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
107. Intestinal Parasites	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
108. Appendicitis and Typhlitis	...	...	..	..	..	..	..	..	..	..	...	...	..	..	1	..	..	..	...	...	...	1	...	1	1	1	...	2	..	...	..	..	..	...	1	6	7
109. Hernia and Obstruction of Intestines	...	1	..	..	..	..	..	..	..	..	...	1	..	..	..	..	..	..	...	...	...	...	...	2	1	3	1	...	..	1	..	..	..	...	2	6	9
110. Other Diseases of Intestines	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	1	...	..	...	..	..	..	...	1	...	1
111. Acute Yellow Atrophy of Liver	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
112. Hydatid Tumors of Liver	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
113. Cirrhosis of Liver	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	1	...	1	...	1	...	..	..	..	...	3	...	3
114. Biliary Calculi	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	1	...	1	1	1	..	1	..	...	1	4	5
115. Other Diseases of Liver	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	1	...	...	...	...	..	...	..	..	..	...	...	1	1
116. Diseases of Spleen	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
117. Peritonitis (non-puerperal)	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
118. Other Diseases of Digestive System	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	1	...	..	...	...	...	...	..	...	..	..	..	...	...	1	1

TABLE A—(Continued)

CAUSES OF DEATH	Under 1		1 to 2		2 to 3		3 to 4		4 to 5		Total Under 5		5 to 10		10 to 15		15 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		Over 90		Total Over 5		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
VI. Diseases of the Genito-Urinary System (Non-Venereal)																																			
119. Acute Nephritis	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	2
120. Brights Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	2	4	3	5	1	3	5	3	3	2	3	..	1	18	19	37
121. Chyluria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
122. Other dis. of Kidneys and Adnexa	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	2	...	3
123. Calculi of Urinary Tract	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
124. Diseases of Bladder	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...	2	1	3
125. Diseases of Urethra, Urinary Abscess, etc	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1	2
126. Diseases of Prostate	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	1	...	...	...	5	...	5
127. Non-venereal dis. of (male) genital organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
128. Uterine Hemorrhage (non-puerperal)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
129. Uterine Tumor (non-cancerous)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...	3	3
130. Other Diseases of Uterus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	2
131. Ovarian Tumors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
132. Salpingitis and other Diseases of Female-Genital Organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	2
133. Non-puerperal Disease of Breast (except Cancer)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
VII. Puerperal State																																			
134. Accidents of Pregnancy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	1	...	...	...	...	...	...	...	...	...	5	5
135. Puerperal Hemorrhage	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1
136. Other Accidents of Labor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	2
137. Puerperal Septicemia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	3	3
138. Puerperal Convulsions	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	3	3
139. Puerperal Phlegmasia Alba Dolens, embolus, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
140. Other Puerperal Accidents (undefined)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....
141. Puerperal Diseases of Breast	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....

TABLE A—(Continued)

CAUSES OF DEATH	Under 1		1 to 2		2 to 3		3 to 4		4 to 5		Total Under 5		5 to 10		10 to 15		15 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		Over 90		Total Over 5		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
VIII. Diseases of Skin																																			
142. Gangrene	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	1	...	...	1	...	..	..	..	...	1	1	2
143. Furuncle (Carbuncle)	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
144. Abscess, Phlegmon	1	...	..	..	..	..	..	..	..	..	1	...	..	..	..	..	..	..	...	...	1	...	...	..	...	...	...	...	..	...	..	..	..	...	...	1	2
145. Other Diseases of Skin	1	...	..	..	..	..	..	..	..	..	1	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	1
IX. Diseases of Bone and Organs of Locomotion																																			
146. Diseases of Bones (non-tuberculous)	...	...	..	..	..	..	..	..	..	..	...	...	..	..	1	..	..	..	1	...	1	...	...	..	...	...	...	...	..	...	..	..	..	...	3	...	3
147. Diseases of Joints (except Rheumatism and Tuberculosis)	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
148. Amputation	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
149. Other Diseases of Organs of Locomotion	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
X. Malformations																																			
150. Congenital Malformations	5	12	..	..	..	..	..	..	..	..	5	12	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	17
XI. Early Infancy																																			
151. Premature Birth, Marasmus, etc	38	27	..	..	..	..	..	..	..	..	38	27	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	65
152. Other Diseases of early infancy	16	9	..	..	..	..	..	..	..	..	16	9	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	25
153. Lack of Care	1	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	2
XII. Old Age																																			
54. Old Age, Senile Debility	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	1	..	...	...	1	1
XIII. Violence																																			
155. Suicide by Poison	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
156. Suicide by Asphyxia	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	1	...	...	..	...	1	...	...	..	...	..	..	..	...	1	1	2
157. Suicide by Hanging or Strangulation	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....
158. Suicide by Drowning	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	1	..	...	..	..	..	...	1	...	1
159. Suicide by Fire Arms	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	1	2	1	...	...	..	...	...	...	1	..	...	..	..	..	...	2	3	5
160. Suicide by Cutting Instruments	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	...	...	...	...	..	...	...	...	...	..	...	..	..	..	...	...	...	....

TABLE A—(Continued)

	CAUSES OF DEATH	Under 1		1 to 2		2 to 3		3 to 4		4 to 5		Total Under 5		5 to 10		10 to 15		15 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		Over 90		Total Over 5		Total
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
	XIII. Violence (Continued)																																			
161.	Suicide by Jumping from High Places	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
162.	Suicide by Crushing	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
163.	Other Suicides	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	...	1	1
164.	Poisoning by Food	...	...	..	1	..	..	..	..	..	..	...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	1
165.	Other Acute Poisonings	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	...	1	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1
166.	Conflagration	1	...	..	..	..	..	..	..	..	..	1	...	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	...	2
167.	Burns and Scalds (Confl'n excepted)	1	...	..	1	2	..	..	..	..	..	3	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	...	3	7
168.	Absorption of Deleterious Gases (Confl'n excepted)	...	...	..	..	..	..	1	..	..	..	1	...	..	..	..	..	..	..	1	..	..	1	..	..	..	1	1	..	..	..	..	..	2	2	5
169.	Accidental Drowning	...	1	..	..	..	..	..	..	..	..	...	1	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	3	...	4
170.	Traumatism by Fire Arms	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1
171.	Traumatism by Cutting Instruments	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	...	1
172.	Traumatism by Fall	...	...	..	..	..	..	..	..	1	..	1	...	..	..	..	..	..	..	1	..	..	..	1	..	2	..	1	4	2	3	..	4	..	...	7	11	19
173.	Traumatism in Mines and Quarries	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
174.	Traumatism by Machines	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
175.	Traumatism by Other Crushing, (Vehicles, Landslides, Etc.)	...	...	..	..	..	..	..	..	..	..	...	...	7	2	1	..	..	..	5	...	2	2	2	1	3	...	4	1	2	1	..	..	..	...	26	7	33
176.	Injuries by Animals	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
177.	Starvation	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
178.	Excessive Cold	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
179.	Effects of Heat	...	4	..	..	..	..	..	..	..	..	...	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1	5
180.	Lightning	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
181.	Electricity (except Lightning)	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1
182.	Homicide by Firearms	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
183.	Homicide by Cutting Instruments	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
184.	Homicide by Other Means	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
185.	Fractures, cause not specified	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
186.	Other External Violence	...	...	..	..	..	..	..	..	1	..	1	...	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	...	2
	XIV. Ill-Defined Diseases																																			
187.	Ill-defined Organic Disease	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
188.	Sudden Death	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
189.	Non-specified or Ill-defined Causes of Death	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	....
	Totals	114	91	14	15	13	11	4	3	3	1	148	121	13	12	7	8	15	18	53	68	57	61	76	76	111	81	110	115	91	122	34	63	3	10	570	635	1474
	Stillborn	...	...	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	98

TABLE B

		1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Diphtheria	Number of cases reported	310	397	264	219	233	358	375	487	399	249
	Morbidity per 1,000 living	2.96	3.75	2.45	2.35	2.15	3.28	3.42	4.42	3.58	2.22
	Death-rate per 1,000 living	0.24	0.72	0.24	0.15	0.18	0.35	0.31	0.31	0.26	0.124
	Case death-rate, percentage	8.06	11.06	9.85	7.31	8.58	10.61	8.80	6.98	7.268	5.62
Scarlet Fever	Number of cases reported	349	213	157	129	332	379	172	163	60	189
	Morbidity per 1,000 living	3.33	2.04	1.47	1.20	3.07	3.48	1.57	1.47	0.53	1.69
	Death-rate per 1,000 living	0.05	0.06	0.02	0.18	0.05	1.83	0.82	0.07	0.009	0.017
	Case death-rate, percentage	1.43	2.82	1.27	1.55	1.51	5.28	5.24	4.92	1.69	1.06
Measles	Number of cases reported	287	605	1015	1085	703	871	454	1294	1413	191
	Morbidity per 1,000 living	2.74	5.77	9.54	10.08	6.50	7.99	6.38	11.69	12.68	1.69
	Death-rate per 1,000 living	0.04	0.12	0.09	0.11	0.13	0.05	0.06	0.14	0.28	0.017
	Case death-rate, percentage	1.39	2.15	0.99	1.11	1.99	0.57	1.54	1.24	2.19	1.05
Typhoid Fever	Number of cases reported	70	56	55	105	51	35	26	33	23	14
	Morbidity per 1,000 living	0.67	0.54	0.52	0.98	0.47	0.32	0.24	.298	0.206	0.124
	Death-rate per 1,000 living	0.12	0.05	0.05	0.12	0.03	0.03	.018	0.05	0.026	0.026
	Case death-rate, percentage	18.57	8.93	9.09	12.38	5.88	8.57	7.69	15.15	13.043	21.42

The death rate, per 1000, for those dying in Cambridge in 1919 was, for diptheria, 0.035; scarlet fever, 0.00; measles 0.017; and typhoid fever, 0.017.

TABLE C

		1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Death Rates per 1,000 Living	Cancer	0.86	0.92	0.80	0.77	0.97 1.04	1.09 1.13	0.985 1.12	1.16 1.38	1.13 1.256	0.918 1.29
	Diarrheal Diseases	1.19	1.13	1.05	1.03	0.94 0.79	0.72 0.62	.794 .701	.713 .605	.753 .655	.445 .347
	Whooping Cough	0.048	0.23	0.07	0.11	0.09 0.09	0.12 0.12	.146 .118	.063 .063	.314 .296	.115 .115
	Bronchitis	0.29	0.37	0.31	0.23	0.33 0.32	0.32 0.32	.191 .191	.172 .172	.493 .493	.142 .152
	Pneumonia	2.17	1.83	1.94	1.95	1.83 1.66	1.61 1.42	1.66 1.63	1.57 1.45	1.489 1.337	1.20 1.27
	Pulmonary Tuberculosis	1.58	1.45	1.30	1.34	1.25 1.67	1.38 1.84	1.43 1.74	1.35 1.90	1.247 1.982	1.06 1.57

In this table the upper number is that derived from the number of deaths of Cambridge residents who died within or without the city. Non-residents dying in Cambridge are excluded.

The lower number is derived from the actual number of deaths in the city and includes non-residents but excludes Cambridge residents who died outside of Cambridge.

TABLE D

	Diphtheria	Scarlet Fever	Measles	Chicken Pox	Whooping Cough	German Measles	Mumps	Typhoid Fever	Pulmonary Tuberculosis	Other Forms Tuberculosis	Lobar Pneumonia	Cerebro-Spinal Meningitis	Ophthalmia Neonatorum	Suppurative Conjunctivitis	Septic Sore Throat	Influenza	Bacillary Dy.	Tetanus	Trachoma	Small Pox	Totals
Week ending:																					
January 4	0	1	2	0	1	0	0	0	1	0	9	0	1	0	0	319	0	0	0	0	334
11	5	4	0	1	4	0	1	0	4	0	13	0	0	1	0	340	0	0	0	0	373
18	3	6	1	1	0	0	1	1	2	1	2	0	0	0	0	143	0	0	0	0	161
25	3	0	1	6	2	0	1	0	8	1	3	1	0	0	0	126	0	0	0	0	152
February 1	8	2	0	4	3	0	1	0	2	1	6	0	0	0	0	74	0	0	0	0	101
8	5	2	1	2	2	0	0	0	3	0	1	0	1	0	0	45	0	0	0	0	62
15	0	7	0	3	1	0	1	0	3	1	1	0	0	0	0	23	0	0	0	0	40
22	3	0	4	0	0	0	1	0	6	1	2	0	1	0	0	23	0	0	1	0	42
March 1	2	2	1	4	0	0	1	0	4	0	2	0	2	1	0	21	0	0	1	0	41
8	3	1	9	4	12	0	2	0	5	1	1	0	0	0	0	14	0	0	0	0	52
15	7	3	2	9	0	1	3	0	2	1	5	0	1	0	0	22	0	0	0	0	56
22	4	2	6	9	7	1	1	1	2	0	4	0	1	0	0	15	0	0	0	0	53
29	4	1	10	11	4	0	5	0	2	0	2	0	0	0	0	8	0	0	0	0	47
April 5	3	2	13	5	8	1	1	0	7	0	1	0	0	1	0	3	0	0	0	0	45
12	3	1	5	10	1	0	1	0	4	0	7	0	0	1	0	7	0	0	0	0	40
19	2	2	8	4	7	1	4	1	5	1	5	0	1	0	0	4	0	0	0	0	45
26	2	5	10	5	10	0	1	0	7	0	3	0	0	0	0	7	0	0	0	0	50
May 3	2	5	13	5	7	1	2	0	3	1	1	1	0	0	0	3	0	0	0	0	44
10	3	8	7	8	20	1	1	0	5	1	4	0	3	1	0	2	0	0	0	0	64
17	4	4	14	10	20	2	1	0	2	1	5	0	2	0	0	7	0	0	0	1	73
24	1	6	2	9	14	3	6	0	7	0	3	1	0	2	0	1	0	0	0	0	55
31	1	2	3	11	5	4	4	0	3	1	2	0	0	1	0	3	0	0	0	0	40
June 7	6	0	10	17	6	0	3	0	7	0	6	0	1	0	0	2	0	0	0	0	58
14	4	4	5	20	8	0	3	0	5	0	1	0	0	0	0	5	0	0	0	0	55
21	1	1	4	17	8	0	3	0	4	0	2	0	0	1	0	4	0	0	0	0	45
28	7	0	8	9	5	0	7	0	5	0	1	0	0	0	0	2	0	0	0	0	44

TABLE D—(Continued)

Week ending:	Diphtheria	Scarlet Fever	Measles	Chicken Pox	Whooping Cough	German Measles	Mumps	Typhoid Fever	Pulmonary Tuberculosis	Other Forms Tuberculosis	Lobar Pneumonia	Cerebro-Spinal Meningitis	Ophthalmia Neonatorum	Suppurative Conjunctivitis	Septic Sore Throat	Influenza	Bacillary Dy.	Tetanus	Trachoma	Small Pox	Totals
July 5	3	1	2	6	3	0	2	1	4	0	2	1	1	0	0	0	0	0	0	0	26
12	1	5	5	6	1	0	1	0	8	1	3	0	0	0	0	0	0	0	0	0	31
19	3	6	4	12	2	0	1	0	5	1	1	0	0	0	1	4	0	0	0	0	40
26	2	3	5	7	1	0	0	0	1	0	0	0	5	0	0	0	0	0	1	0	25
August 2	6	0	6	1	6	0	0	1	5	0	1	0	0	1	0	1	0	0	0	0	28
9	1	3	2	1	6	0	0	1	8	0	0	0	2	0	6	0	0	0	0	0	30
16	6	3	1	0	14	0	0	0	2	0	2	0	0	1	0	0	1	0	0	0	30
23	5	3	2	3	6	0	1	0	4	1	0	0	1	1	0	1	0	0	0	0	28
30	0	3	0	1	8	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	14
September 6	1	0	0	0	3	0	0	1	2	0	1	0	1	0	0	1	0	0	0	0	10
13	3	2	2	0	10	0	1	0	8	0	3	0	1	0	1	3	0	0	0	0	34
20	2	1	0	1	4	0	5	0	5	0	3	0	0	1	0	2	1	0	1	0	26
27	4	2	0	4	6	0	3	0	9	1	1	0	1	1	0	2	0	0	0	0	34
October 4	6	3	1	9	17	0	6	0	2	1	2	0	0	1	1	5	0	0	0	0	54
11	5	4	0	2	4	0	3	2	1	1	2	0	0	1	0	1	0	0	0	0	26
18	5	6	0	0	4	0	1	0	7	0	1	0	0	0	0	0	0	0	0	0	24
25	7	7	2	0	13	4	9	0	4	2	6	0	2	0	0	2	0	0	0	0	58
November 1	7	9	4	3	8	1	12	0	7	0	4	0	0	0	0	0	0	0	0	0	55
8	8	5	2	3	16	0	3	0	2	0	3	0	0	0	0	0	0	0	0	0	42
15	11	6	3	1	15	0	4	3	4	2	2	0	0	0	1	1	0	0	0	0	53
22	13	3	6	7	14	0	22	0	4	0	3	0	1	0	0	2	0	0	0	0	75
29	8	8	10	9	11	0	5	0	2	1	2	0	0	0	0	0	0	0	0	0	56
December 6	8	15	10	17	19	0	12	0	2	0	6	0	2	0	0	1	0	0	0	0	92
13	14	9	11	33	21	1	47	0	3	0	3	0	1	0	0	5	0	0	0	0	148
20	13	5	16	25	16	0	32	1	1	0	9	0	0	2	0	10	0	0	0	0	130
27	12	3	24	13	26	0	27	0	2	1	5	1	0	1	0	0	0	0	0	0	115
31	9	4	7	22	23	1	14	0	4	0	7	0	1	0	0	1	0	0	0	0	93
Totals	249	190	264	370	432	22	266	14	215	24	164	5	33	19	10	1265	2	0	4	1	3549

TABLE E

	Ward	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	T'ls.
DIPHTHERIA	**1**	2	3	1	0	1	2	0	0	0	0	0	0	9
	2	2	1	1	2	0	1	0	1	1	0	0	1	10
	3	3	0	2	1	5	1	0	0	1	1	1	3	18
	4	2	2	2	2	1	1	1	0	1	4	3	2	21
	5	1	0	4	0	0	3	0	1	1	2	2	4	18
	6	4	2	3	5	0	0	2	6	2	3	5	6	38
	7	0	3	3	0	0	3	0	2	2	2	3	12	30
	8	0	0	2	0	0	1	3	0	0	1	6	4	17
	9	0	0	1	0	0	3	1	1	1	4	6	10	27
	10	0	0	0	1	1	4	0	2	0	3	3	6	20
	11	3	0	0	1	1	1	4	1	3	8	11	8	41
	Total	17	11	19	12	9	20	11	14	12	28	40	56	249
SCARLET FEVER	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	1	0	0	0	0	0	3	1	5
	3	6	0	1	1	3	0	0	0	0	2	2	1	16
	4	2	1	3	2	7	0	4	0	1	3	4	3	30
	5	2	0	0	2	1	2	0	0	1	0	0	6	14
	6	1	3	0	0	3	0	3	2	0	3	3	9	27
	7	0	3	2	1	4	1	0	1	0	3	1	6	22
	8	1	1	0	2	0	1	0	0	0	0	2	1	8
	9	0	2	0	4	3	1	8	1	2	0	4	1	26
	10	0	1	1	0	1	0	0	1	0	1	2	6	13
	11	1	0	0	0	0	0	0	7	3	14	2	2	29
	Total	13	11	7	12	23	5	15	12	7	26	23	36	190
SEPTIC S. THROAT	**1**	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	1	0	0	0	0	0	1
	6	0	0	0	0	0	0	0	0	0	0	1	0	1
	7	0	0	0	0	0	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0	0	0	0	0	0
	9	0	0	0	0	0	0	0	6	1	0	0	0	7
	10	0	0	0	0	0	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0	0	1	0	0	1
	Total	0	0	0	0	0	0	1	6	1	1	1	0	10
MUMPS	**1**	0	1	0	0	0	1	0	0	0	0	0	0	2
	2	0	1	0	0	2	3	0	0	0	0	0	2	8
	3	1	0	5	3	4	4	0	0	1	0	2	3	23
	4	0	0	1	0	0	1	0	0	5	1	0	3	11
	5	0	0	0	0	3	3	0	0	0	0	0	1	7
	6	0	1	0	1	2	1	0	0	0	2	1	13	21
	7	2	0	0	0	0	1	1	0	2	3	7	34	50
	8	0	0	1	2	0	2	0	0	0	3	4	46	58
	9	0	0	1	3	0	0	0	1	6	15	20	27	73
	10	1	0	0	0	1	0	1	0	0	0	0	2	5
	11	0	0	3	0	0	1	1	0	0	1	1	1	8
	Total	4	3	11	9	12	17	3	1	14	25	35	132	266

TABLE E—Continued

	Ward	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	T'ls.
GERMAN MEASLES	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	1	0	0	0	0	0	0	0	1
	6	0	0	1	0	1	0	0	0	0	1	0	0	3
	7	0	0	1	1	7	0	0	0	0	0	0	0	9
	8	0	0	0	0	0	0	0	0	0	0	0	0	0
	9	0	0	0	1	1	0	0	0	0	3	0	1	6
	10	0	0	0	0	0	0	0	0	0	1	0	0	1
	11	0	0	0	0	1	0	0	0	0	0	0	1	2
	Total	0	0	2	2	11	0	0	0	0	5	0	2	22
MEASLES	1	0	0	0	2	0	0	0	0	0	0	1	5	8
	2	0	0	2	0	0	0	0	0	0	0	0	1	3
	3	1	1	18	15	11	2	2	0	0	1	0	1	52
	4	0	1	0	2	8	3	1	0	1	0	0	1	17
	5	0	2	6	8	9	1	0	0	0	0	0	1	27
	6	0	1	0	1	1	6	2	1	0	1	1	5	19
	7	1	0	0	2	1	6	10	3	0	0	0	1	24
	8	1	0	3	6	2	6	5	2	1	0	0	2	28
	9	1	1	0	1	1	4	0	0	0	3	5	0	16
	10	0	0	1	0	2	0	0	0	0	0	0	12	15
	11	0	0	0	0	0	0	0	0	0	2	14	39	55
	Total	4	6	30	37	35	28	20	6	2	7	21	68	264
TYPHOID	1	0	0	0	0	0	0	0	0	1	0	0	0	1
	2	0	0	0	0	0	0	0	0	0	0	1	0	1
	3	0	0	1	0	0	0	1	0	0	0	0	0	2
	4	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	1	0	0	1
	6	0	0	0	0	0	0	0	1	0	0	0	0	1
	7	0	0	0	1	0	0	0	0	0	0	0	0	1
	8	0	0	0	0	0	0	0	0	0	0	2	0	2
	9	0	0	0	0	0	0	1	1	0	1	0	0	3
	10	0	0	0	0	0	0	0	0	0	0	0	1	1
	11	1	0	0	0	0	0	0	0	0	0	0	0	1
	Total	1	0	1	1	0	0	2	2	1	2	3	1	14
CHICKEN POX	1	0	0	2	0	0	1	0	0	0	0	0	21	24
	2	0	1	2	1	1	4	3	0	0	0	0	5	17
	3	2	0	2	3	3	8	5	0	0	0	0	5	28
	4	1	1	2	0	2	2	2	4	2	0	8	9	33
	5	0	1	1	2	2	1	1	0	0	0	0	18	26
	6	0	0	0	3	4	8	5	0	0	0	8	6	34
	7	0	1	8	4	4	14	1	0	4	1	0	1	38
	8	0	1	0	1	3	1	4	0	0	0	0	12	22
	9	3	2	4	8	15	23	1	1	0	3	1	3	64
	10	1	0	3	0	3	1	2	0	2	4	1	28	45
	11	4	3	9	5	3	4	4	0	1	1	3	2	39
	Total	11	10	33	27	40	67	28	5	9	9	21	110	370

TABLE E—Continued

	Ward	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	T'ls.
WHOOPING COUGH	1	1	1	1	1	0	0	0	0	0	0	0	5	9
	2	1	0	1	4	2	3	2	0	3	3	0	2	21
	3	2	1	8	1	4	3	6	4	4	0	1	3	37
	4	0	1	8	1	5	2	0	6	3	13	6	34	79
	5	1	0	1	5	11	2	0	0	0	4	0	6	30
	6	4	0	1	4	0	9	2	12	6	11	22	35	106
	7	1	0	1	1	1	1	0	5	2	11	10	8	41
	8	0	0	0	10	15	4	0	0	0	0	8	1	38
	9	0	0	2	0	3	2	1	8	2	0	3	4	25
	10	0	0	0	3	19	1	0	1	3	0	1	0	28
	11	0	0	0	0	2	0	0	0	4	0	5	7	18
	Total	10	3	23	30	62	27	11	36	27	42	56	105	432
C. S. MENINGITIS	1	0	0	0	0	1	0	0	0	0	0	0	0	
	2	0	0	0	0	0	0	0	0	0	0	0	1	1
	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	1	0	0	0	0	0	0	0	1
	7	0	0	0	0	0	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0	0	0	0	0	0
	9	0	0	0	0	0	0	0	0	0	0	0	0	0
	10	1	0	0	0	0	0	0	0	0	0	0	0	1
	11	0	0	0	0	0	0	1	0	0	0	0	0	1
	Total	1	0	0	0	2	0	1	0	0	0	0	1	5
SUPPURATIVE CONJ.	1	0	0	0	1	0	0	0	0	0	0	0	0	1
	2	0	0	0	0	0	1	0	1	1	1	0	0	4
	3	1	0	0	0	1	0	0	2	0	0	0	0	4
	4	0	0	0	0	0	0	0	0	0	1	0	0	1
	5	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0	0	0	1	1
	7	0	0	0	0	0	0	0	0	1	0	0	0	1
	8	0	0	0	0	0	0	0	0	0	0	0	0	0
	9	0	0	0	0	3	0	0	0	0	0	0	0	3
	10	0	0	0	0	0	0	0	0	0	0	0	2	2
	11	0	1	0	1	0	0	0	0	0	0	0	0	2
	Total	1	1	0	2	4	1	0	3	2	2	0	3	19
OPHTHALMIA NEO.	1	0	0	0	0	0	0	1	0	0	0	0	0	1
	2	0	1	0	1	0	0	0	0	0	0	0	1	3
	3	0	0	0	0	2	0	0	1	0	0	0	0	3
	4	1	0	1	0	0	0	1	1	0	0	1	0	5
	5	0	0	0	0	0	0	1	0	0	0	0	0	1
	6	0	0	0	0	2	0	1	0	1	0	0	1	5
	7	0	0	0	0	1	1	2	0	1	1	0	0	6
	8	0	0	0	0	0	0	0	0	0	0	0	1	1
	9	0	0	1	0	0	0	0	0	0	0	0	0	1
	10	0	1	0	0	0	0	0	0	0	1	0	0	2
	11	0	1	1	0	0	0	0	1	1	0	0	1	5
	Total	1	3	3	1	5	1	6	3	3	2	1	4	33

TABLE E—Continued

	Ward	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	T'ls.
PUL. TUBERCULOSIS	**1**	0	0	2	2	1	0	0	1	0	0	0	2	8
	2	3	1	0	0	2	1	1	2	1	1	0	1	13
	3	1	4	1	3	2	0	4	2	1	2	1	2	23
	4	2	2	0	3	0	3	3	0	3	0	2	2	20
	5	1	0	2	5	3	1	1	1	2	2	1	0	19
	6	3	5	3	1	3	6	2	3	7	4	4	1	42
	7	2	1	0	2	1	7	4	1	0	4	1	2	25
	8	0	0	1	2	2	0	0	1	2	3	1	1	13
	9	1	1	0	0	2	0	1	2	5	0	0	0	12
	10	0	0	2	2	2	0	3	2	1	0	1	1	14
	11	3	3	1	3	1	4	2	1	2	3	3	0	26
	Total	16	17	12	23	19	22	21	16	24	19	14	12	215
TUBERCULOSIS, OTHER FORMS	**1**	0	0	0	0	0	0	0	0	1	0	0	0	1
	2	0	0	1	1	0	0	0	0	0	0	1	0	3
	3	2	1	0	0	1	0	2	0	0	1	0	0	7
	4	0	0	0	0	0	0	0	0	0	2	0	0	2
	5	0	0	0	0	0	0	0	0	0	0	2	0	2
	6	0	0	0	0	0	0	0	0	0	1	0	0	1
	7	0	0	1	0	0	0	0	0	0	0	0	0	1
	8	0	0	0	0	0	0	0	0	0	0	0	0	0
	9	1	0	0	0	0	0	0	1	0	0	0	0	2
	10	0	0	0	0	2	0	0	0	0	0	0	0	2
	11	0	1	0	0	1	0	0	0	0	0	0	1	3
	Total	3	2	2	1	4	0	2	1	1	4	3	1	24
LOBAR PNEUMONIA	**1**	1	0	3	1	0	0	0	0	3	0	0	0	8
	2	0	0	3	1	1	2	1	0	0	0	1	4	13
	3	4	0	1	2	1	3	0	0	1	0	0	7	19
	4	4	1	0	2	3	1	0	0	2	1	3	2	19
	5	1	2	0	0	1	1	1	0	0	2	2	1	11
	6	1	1	1	2	4	0	0	1	1	2	1	6	20
	7	4	1	1	1	0	0	1	1	0	1	2	2	14
	8	3	0	1	2	0	0	1	0	0	0	0	0	7
	9	3	1	1	0	2	2	1	0	1	3	0	3	17
	10	10	0	1	3	3	1	1	0	0	0	0	0	19
	11	1	1	0	1	0	1	0	0	1	4	3	5	17
	Total	32	7	12	15	15	11	6	2	9	13	12	30	164
INFLUENZA	**1**	36	13	5	1	0	1	0	0	1	1	1	0	59
	2	54	10	4	1	1	0	3	0	0	0	0	0	73
	3	95	3	11	2	7	6	0	0	2	1	0	3	130
	4	93	14	2	4	0	0	0	0	2	0	0	5	120
	5	96	11	4	7	1	1	0	1	1	0	1	4	127
	6	114	8	9	4	1	1	1	0	2	1	1	3	145
	7	94	8	5	1	0	0	0	0	0	2	0	1	111
	8	77	17	2	2	2	0	0	0	0	0	0	0	100
	9	104	21	11	2	1	2	0	0	0	1	0	1	143
	10	144	8	7	0	0	1	1	0	0	1	0	0	162
	11	86	7	0	0	0	1	0	0	0	1	0	0	95
	Total	993	120	60	24	13	13	5	1	8	8	3	17	1265

TABLE E—Continued

	Ward	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Tl's.
TRACHOMA	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	1	0	0	0	0	0	1
	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	0	2	0	0	0	0	0	0	0	0	0	0	2
	5	0	0	0	0	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0	0	0	0	0	0
	9	0	0	0	0	0	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0	1	0	0	0	1
	Total	0	2	0	0	0	0	1	0	1	0	0	0	4

	Ward	Aug.	Sept.											
BACILLARY DYSENT'Y		....	....	....	....	....	....	....	....	....	....	...	...	....
		....	....	....	....	....	....	....	....	....	....	...	...	....
	2	1	....	....	....	....	....	....	....	....	....	...	...	1
	6	....	1	....	....	....	....	....	....	....	....	...	...	1
	Tt'ls	1	1	....	....	....	....	....	....	....	....	...	...	2

	Ward	May												
	3	1	....	....	....	....	....	....	....	....	....	...	...	1
		....	....	....	....	....	....	....	....	....	....	...	...	.....
	Total	1	....	....	....	....	....	....	....	....	....	...	...	1

TABLE F

MORBIDITY DISTRIBUTION		Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	Over 90	Total
Diphtheria	M	1	7	10	9	5	55	24	7	1	2	...	..	..	..	..	..	121
	F		3	6	9	13	48	32	3	7	5	1	1	..	..	..	..	128
	P	1	10	16	18	18	103	56	10	8	7	1	1	..	..	..	..	249
Scarlet Fever	M	1	4	3	5	8	43	6	4	4	...	...	..	..	..	..	..	78
	F	..	1	8	14	13	48	13	2	12	1	...	..	..	..	..	..	112
	P	1	5	11	19	21	91	19	6	16	1	...	..	..	..	..	..	190
Septic Sore Throat	M	..	...	...	...	...	2	...	...	1	1	...	..	..	..	..	..	4
	F	..	...	1	...	1	1	...	1	1	1	...	..	..	..	..	..	6
	P	..	...	1	...	1	3	...	1	2	2	...	..	..	..	..	..	10
Mumps	M	..	1	3	4	8	86	23	2	11	3	1	..	..	..	..	..	142
	F	1	2	...	4	5	74	25	6	4	3	...	..	..	..	..	..	124
	P	1	3	3	8	13	160	48	8	15	6	1	..	..	..	..	..	266
German Measles	M	..	...	1	...	4	1	2	...	2	...	...	..	..	..	..	..	10
	F	2	2	...	...	...	7	1	...	...	...	...	..	..	..	..	..	12
	P	2	2	1	...	4	8	3	...	2	...	...	..	..	..	..	..	22
Measles	M	8	6	9	17	14	77	1	2	4	1	...	..	..	..	..	..	139
	F	2	5	4	16	14	73	5	4	1	1	...	..	..	..	..	..	125
	P	10	11	13	33	28	150	6	6	5	2	...	..	..	..	..	..	264
Typhoid Fever	M	..	...	...	...	...	1	2	3	2	1	1	1	..	..	..	..	11
	F	..	...	...	...	...	...	...	...	...	2	1	..	..	..	..	..	3
	P	..	...	...	...	...	1	2	3	2	3	2	1	..	..	..	..	14
Chicken Pox	M	14	9	5	14	17	96	12	1	3	3	...	1	..	..	..	..	175
	F	4	11	7	7	16	119	18	4	5	1	3	..	..	..	..	..	195
	P	18	20	12	21	33	215	30	5	8	4	3	1	..	..	..	..	370
Whooping Cough	M	22	18	24	36	27	81	2	...	...	4	...	..	..	..	..	..	213
	F	24	18	20	21	25	95	9	1	2	3	1	..	..	..	..	..	219
	P	46	36	44	56	52	176	11	1	2	7	1	..	..	..	..	..	432
Cerebro-Spinal Meningitis	M	..	...	...	...	...	...	...	1	1	...	...	..	..	..	..	..	2
	F	..	...	...	...	...	...	...	1	1	...	1	..	..	..	..	..	3
	P	..	...	...	...	...	...	...	2	2	...	1	..	..	..	..	..	5

TABLE F—(Continued)

MORBIDITY DISTRIBUTION		Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	Over 90	Total
Suppurative Conjunctivitis	M	8	...	...	...	...	...	...	...	...	...	...	..	..	..	..	..	8
	F	9	2	...	...	...	...	...	...	...	...	...	..	..	..	..	..	11
	P	17	2	...	...	...	...	...	...	...	...	...	..	..	..	..	..	19
Ophthalmia Neonatorum	M	18	...	...	...	...	...	...	...	...	...	...	..	..	..	..	..	18
	F	15	...	...	...	...	...	...	...	...	...	...	..	..	..	..	..	15
	P	33	...	...	...	...	...	...	...	...	...	...	..	..	..	..	..	33
Pulmonary Tuberculosis	M	..	...	...	1	...	2	1	11	35	27	20	11	8	2	..	..	118
	F	..	...	1	...	...	1	5	10	46	16	11	5	2	..	..	..	97
	P	..	...	1	1	...	3	6	21	81	43	31	16	10	2	..	..	215
Other Forms Tuberculosis	M	1	1	...	...	...	3	...	3	3	...	...	1	..	..	..	..	9
	F	1	...	...	...	...	3	...	...	3	2	2	1	..	..	..	..	15
	P	2	1	...	...	...	6	...	3	6	2	2	2	..	..	..	..	24
Lobar Pneumonia	M	1	6	4	3	1	7	4	4	7	12	15	8	9	6	1	..	88
	F	3	3	2	1	4	12	6	5	11	9	9	3	5	3	..	..	76
	P	4	9	6	4	5	19	10	9	18	21	24	11	14	9	1	..	164
Influenza	M	16	18	17	19	14	74	42	40	129	132	39	24	15	6	..	..	585
	F	7	20	26	22	22	56	38	39	211	146	50	23	16	2	2	..	680
	P	23	38	43	41	36	130	80	79	340	278	89	47	31	8	2	..	1265
Trachoma	M	..	...	...	...	...	...	...	...	...	1	1	1	..	..	..	..	3
	F	..	...	...	...	...	...	...	...	1	...	...	..	..	..	..	..	1
	P	..	...	...	...	...	...	...	...	1	1	1	1	..	..	..	..	4
Bacillary Dysentery	M	..	...	...	...	...	...	...	...	...	...	...	..	..	..	..	..	....
	F	..	...	...	...	...	2	...	...	...	...	...	..	..	..	..	..	2
	P	..	...	...	...	...	2	...	...	...	...	...	..	..	..	..	..	2
Small Pox	M	..	...	...	...	...	...	...	...	...	...	...	1	..	..	..	..	1
	F	..	...	...	...	...	...	...	...	...	...	...	..	..	..	..	..	....
	P	..	...	...	...	...	...	...	...	...	...	...	1	..	..	..	..	1

DISEASES DANGEROUS TO PUBLIC HEALTH

This has been a banner year when the number of cases of Diseases Dangerous to Public Health are considered. During the first of the year we had a second wave of influenza which gave us 48 deaths in January, ten in February, eight in March, and becoming normal in April, and remaining so. The charts on the other diseases show that we were going through the low mark of a wave which, taken over a period of years, seems to have a high mark when the number of susceptibles are of a sufficient number, and a low mark when the number of susceptibles are not so great. Typhoid showed a great decrease, and 1919 showed the lowest number we have ever had, fourteen being the total for the year.

The following subdivisions show in greater detail the progress made during the year in the more important diseases.

TYPHOID FEVER

The lowest mark ever obtained by Cambridge, in typhoid cases reported, was reached this year when only 14 cases were reported. Last year was thought to be remarkably low but when the population is considered, and the great number of people who go away into the country where the sanitary arrangements, at their best, are comparatively poor, it is remarkable that more people do not return infected with typhoid.

It is encouraging to see more attention being paid to inoculation with anti-typhoid and paratyphoid vaccines by people going away from the city on vacation, and it would be wise if every one that intended to go into the country on a vacation would have these inoculations given by their physicians, vaccine supplied free by this department, and thus cut down again the figures which are now so low.

DIPHTHERIA

Diphtheria in common with the other contagious diseases had the lowest number of cases reported, 249, since 1914, when we had 232 reported. We had 150 fewer cases this year than last and 238 fewer cases than in 1917. The death rate of 0.124 per 1,000 living has also decreased, being the lowest we ever had. Last year it was 0.26 and in 1917 0.31. We hope that the number next year will be still lower. The death rate can still be reduced with the giving of

antitoxin early, and we earnestly recommend that the antitoxin be given on all suspected cases, without waiting for a laboratory positive report, so that this can be realized. The immunization of contacts is also strongly recommended to the end that the number of secondary cases in a household infected may be reduced. It is further strongly recommended that attending physicians take cultures of all contacts to the end of obtaining an earlier diagnosis or knowledge of possible carriers.

SCARLET FEVER

Scarlet Fever, unlike the other diseases, showed a slight increase in number of cases. The number 189 this year being 129 more than last year, when we had the unusually small number of 60 cases reported; the number of cases in 1919 being about on the average with other years. The disease seemed to be of a very mild type, as the death rate of .017 was the lowest we have had, with the exception of 1918 with its death rate of .009. In this mild type there is a tendency to make light of a sore throat and slight blush of the skin which only serves to increase the number of cases, and some of those light cases may infect someone more susceptible with a very severe infection.

TUBERCULOSIS

The "Great White Plague," contrary to expectation of some people who based their theories on the showing of the draft examinations, and because of privations a portion of the people suffered on account of the War, showed a falling off in the number of new cases reported, and also in total deaths from Pulmonary Tuberculosis of 176, as compared with that of 1918 with a total of 221, and 1917 with a total of 207. The death rate of Pulmonary Tuberculosis also shows a decrease over 1917 with 1.35 of residents in and out of the city, and 1.24 in 1918, to 1.06 in 1919. The total in city of resident and non-resident was 1.57 as compared with 1917 of 1.90, and 1.98 in 1918.

The whole Tuberculosis situation is one of encouragement, as the death rate for the year was the lowest we have ever had, and it is also encouraging to us in Cambridge when we realize that out of the total of 176 deaths from Pulmonary Tuberculosis, there were

108 residents and 68 non-residents, or 38 per cent of our deaths in Cambridge were non-residents, due, of course, to our Tuberculosis Hospital of 150 beds and the Holy Ghost Hospital of 36 beds, both of which take many cases from other cities having no Tuberculosis Hospitals. This non-resident number, 68, compared with the number of residents who died outside of the city, shows a difference of 57 more non-residents dying in our city than our residents dying outside.

JOSEPH M. WADDEN, M.D.,

(Acting) Medical Adviser.

BACTERIOLOGICAL LABORATORY

DIPHTHERIA

	POSITIVE		NEGATIVE			
	Diagnosis	Release	Diagnosis	Release	No growth	Totals
January	4	1	50	10	2	67
February	8	1	70	28	2	109
March	6	4	54	17	2	83
April	4	3	74	21		102
May	6	3	63	18	3	93
June	7	3	55	17	1	83
July	9	1	25	12		47
August	5		33	22	4	64
September	3		35	6	2	46
October	11	4	73	18	1	107
November	14	5	119	47	2	187
December	27	10	184	51	1	273
Totals	104	35	835	267	20	1261

	TUBERCULOSIS			TYPHOID				
	Positive	Negative	Total	Positive	Negative	Total	Other Examinations	Totals
January	28	55	83		6	6		89
February	20	51	71		2	2	1	74
March	28	67	95	1	2	3	3	101
April	28	69	97	1	5	6		103
May	20	57	77		4	4	2	83
June	33	47	80		1	1		81
July	18	34	52	3	6	9	1	62
August	14	22	36	4	10	14	3	53
September	28	32	60		8	8		68
October	21	41	62		8	8		70
November	13	48	61	2	2	4	1	66
December	12	47	59		13	13		72
Totals	263	570	833	11	67	78	11	922

The total number of examinations for the year was 2,183.

WALTER C. FEELEY, M.D.,

Bacteriologist.

REPORT OF CAMBRIDGE TUBERCULOSIS HOSPITAL FOR YEAR ENDING 1919

I respectfully submit the following report of the work done at the Cambridge Tuberculosis Hospital during the year 1919.

On January 1, 1919, there remained in the hospital from the previous year 77 cases. During the present year we admitted 145 cases, and readmitted 34 cases, making a total of 256 cases treated during the present year.

RESIDENTS

Of the 77 patients remaining from the previous year, 47 were patients of 1918; 12 of 1917; 3 of 1916; 3 of 1915; 5 of 1914; 3 of 1913; 3 of 1911; and 1 of 1910.

1910. A case of chronic phthisis, that is still resident.

1911. Two; both cases of chronic phthisis. One, an old man, gradually failed and died. The other, a young fellow, improved enough to go to work.

1913. Three; all advanced; two still resident. The third gradually failed and died.

1914. Five; all chronic phthisis; two gradually failed and died; three still resident.

1915. Three; all chronic phthisis. One gradually failed and died. Another went home against advice. The third is still resident.

1916. Three; all chronic phthisis. One left against advice, for Canada. Two still resident.

1917. Eleven remained from 1916. Three gradually failed and died. Three were discharged to their homes, of whom two were much improved. One was transferred to Rutland. One left against advice, much improved. Two are still resident.

1918. Forty-seven remained from 1917. Fourteen died. One was incipient, two moderately advanced, and forty-four far advanced. Eight are still resident. One incipient case improved and was discharged. Of the two moderately advanced, one improved and was discharged; the other became advanced and left against advice. Of the forty-four advanced cases, fourteen died; one was discharged to the Holy Ghost Hospital, Cambridge; one to a sanatorium on the Cape, much improved; one to South Hanson, improved; seven were discharged much improved, and of these five left against advice.

RE-ADMISSIONS

Thirty-four cases were re-admitted this year, as against 39 cases of last year. Two were patients of 1911; one of 1913; four of 1915; five of 1916; five of 1917; eight of 1918; nine of 1919.

Incipient. One; this case was discharged in 1915 improved, but returned in 1919 with chest condition much advanced, and died within one month.

Moderately advanced. Three; one remained in the hospital three months and was discharged to Rutland, much improved. Another with advanced process gradually failed and died. The third is still resident, much improved.

Advanced. Thirty re-admissions this year; seven died; one transferred to the Boston Lying-in; one to the Cambridge City for operation; one was discharged for disorderly conduct; four discharged with condition improved; six left against advice, not improved; ten cases are still resident.

Nine cases died; four discharged improved; six left against advice, not improved; one transferred to Rutland; one to Boston Lying-in; one discharged for disorderly conduct; one case was re-admitted twice; eleven are still resident; total, thirty-four.

NEW CASES

During the year we admitted 145 new cases as against 229 of last year.

STAGES. Three patients were admitted as incipient, seven as moderately advanced, and 130 as advanced. Three were questionable cases of tuberculosis. Two were discharged before physical examinations could be made.

SEX. Eighty-four males and sixty-one females were admitted, as against 116 males and 113 females in the year 1918.

Age..	2-5	5-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
	2	2	8	64	28	20	12	5	3

The highest percentage was between 20 and 30 years.

SOCIAL STATUS. Eighty-six were married; forty-nine were single; nine were widowed; one history unobtainable.

NATIVITY. Sixty-seven were foreign; seventy-seven were born in the United States, fifty-six in Massachusetts, and seventeen in Cambridge.

NATIONALITY. The majority were Americans.

79 American
12 Irish
10 Italian
7 Canadian
7 Jewish
6 Russian
5 English
5 Negroes
3 Greek
4 Armenian
1 without any history
2 Swedish
1 Scotch
1 Portuguese
1 Finn
1 French-Canadian

OCCUPATION.

43 Housewives
1 Manicurist
9 Machinists
2 Polishers
3 Salesmen
1 Cashier
1 Candy Worker
1 Shipyard Worker
1 Waiter
1 Sheet Metal Worker
12 Laborers
10 Children
1 Fisherman
1 Nurse
1 Fireman
1 Leather Worker
1 Engineer
4 Storekeepers
2 Carpenters
3 Shoemakers
3 Janitors
2 Factory Employees
2 Printers
1 Paper Pedlar
3 Rubber Workers
3 Railroad Employees
1 Cotton Weaver
6 Students
2 Tailors
3 Maids
1 Kitchen Helper
3 Painters
3 Teamsters
2 Mechanics
1 Canner
1 Knitter
1 Bootblack
1 Cook
1 Blacksmith
1 Shipper
1 Box maker
1 Bricklayer
1 Pressman
1 Traffic man

SOURCE. Twenty-nine cases gave a history of one or more cases in the immediate family; eight gave a history of contact in some way or other; in the remaining one hundred and eight cases, no source of contagion could be established.

AVERAGE HIGHEST AND LOWEST NUMBER OF PATIENTS EACH MONTH

1919	Aver.	High	Low	1919	Aver.	High	Low
January	83	88	76	July	71	72	71
February	81	83	76	August	67	69	67
March	77	83	76	September	67	69	67
April	83	87	77	October	61	67	61
May	77	83	72	November	57	60	57
June	73	76	67	December	56	59	56

CLINICAL FORMS

Chronic Pulmonary Tuberculosis	136
Acute Pneumonic Phthisis	5
Acute Miliary Tuberculosis	2

One case without any history.
One case as a negative T.B., but with Chronic Diffuse Nephritis.

COMPLICATIONS

Hemorrhages. Fifteen had one or more hemorrhages. One death occurred from hemorrhage.

Diarrhœa. Five cases had tubercular enteritis as a complication.

Meningitis. Four cases had meningitis occurring in the disease.

Laryngitis. Three cases had laryngitis.

Other forms. Pregnancy, 2; cervical glands, 1; myocarditis, 3; dementia praecox, 1; tubercular knees, 3; asthma, 1; nephritis, 2; paraplegia below umbilicus, 1; arthritis deformans, 1; chronic endometritis, 1; fistula in ano, 1; totally blind, 1.

SPUTA

Sputa. On entrance 88 were positive and 57 negative.

RESULTS

Mortality. Forty-three cases were discharged dead.

Unimproved. Thirty-two cases were discharged unimproved.

Improved. Forty-one were discharged with the disease improved.

Transferred. Two cases were transferred to South Hanson; two to the Cambridge City Hospital; two to North Reading; one to Tewksbury; one to the Holy Ghost Hospital; one to the Massachusetts General Hospital, Boston; one to Mattapan; one to Boston Lying-in Hospital; and one to the Psychopathic Hospital.

Resident. Fifty-eight cases remained in the hospital December 31, 1919, as against seventy-seven cases December 31, 1918.

During the year six veterans of the recent World's War were patients at the hospital, arrangements having been made with the United States Public Health Service to aid in the hospitalization of discharged veterans.

FELIX McGIRR, M.D.,

Physician in Charge

DISPENSARY FOR TUBERCULOSIS

The following report of the Dispensary for Tuberculosis is respectfully submitted for the year 1919.

During the year 1919 the total number of cases examined was 234. Of this number 99 were new cases. Of the new cases 42 were male, and 57 female. The youngest patient examined was 1 1-2 years old. The oldest 60 years.

The following tabulation shows the relative ages of the new cases:

Under 10 years of age	37
Between 10 and 20 years	35
" 20 " 30 "	12
" 30 " 40 "	17
" 40 " 50 "	9
" 50 " 60 "	3

There were 9 positive cases discovered. A negative diagnosis was made on 62 cases—5 cases were found in the arrested stage, and 12 were recorded as suspicious. There were 12 cases deferred.

The following shows the ages of the positive cases:

15—18—19—22—34—39—40—47—48

The above report shows an increase of 10 in the number of the physical examinations over any previous year since the clinic was instituted. The new patients, however, were fewer by 11 than any previous report.

The reaction since the war has no doubt resulted in stimulating a greater desire for work on account of the higher wages obtained and the increased cost of maintenance and sustenance. Therefore less attention is given to the care of the physical well-being. The clinic attendance no doubt suffers on this account, as all who are able to do so find employment in the factories at very attractive wages. The smaller children at home are thus neglected for lack of escort, and are not able to come to the clinic alone. It would seem that this work of escort duty for the little ones might well be taken care of by interested social workers or special nurses employed for the purpose.

The present Dispensary quarters are not easily located, on account of poor lighting facilities at night. An outside light would overcome this difficulty. I would also suggest that the factories, and other public places, might be placarded periodically calling attention to the clinic and its purposes.

Cases of advanced Tuberculosis are very likely "loose" in our midst unrecognized because of neglect or failure to be examined. The fear of a positive diagnosis keeps a certain few away from the doctors'

office and clinics. This class offers a difficult problem for the health worker. The clinic encourages the cooperation of the local physician and other agencies and will act upon all cases wherein proper notification is given. As heretofore the clinic office is open daily from 8–9 A.M., for administrative purposes. The clinics are held Tuesdays and Saturdays A.M. between 10–12 o'clock, and Thursday evenings between 7.30 and 9 P.M. for physical examinations.

P. J. FLEMING, M.D.,

Dispensary Physician.

SCHOOL INSPECTION

The inspection of the schools has been carried out as in former years by a corps of physicians and nurses employed and paid by the Board of Health.

The former, six in number, for the public, and six for the parochial, visiting the schools assigned them every day and once in the year making a complete physical examination of every pupil, and noting on the physical examination cards, which were introduced into the schools this year, and physical defect of the pupil and the recommendation for the remedying of that defect.

The nurses, six Board of Health, and one paid by the Parents' Association of Agassiz, Lowell, Harvard, Merrill, and Felton Schools, carrying out as far as possible these recommendations.

At the beginning of the Fall term the Red Cross physician, Doctor Crothers, and three nurses who were assigned as requested by the Red Cross to five schools in different sections of the city, namely Sleeper, Ellis, Putnam, Webster, and Gore, with a total of about 2,840 pupils, began their work of studying the methods of the Board of Health in School Inspection, and devising, if possible, a better system. The report of Doctor Crothers (extracts of which follow) bears out this Board's oft repeated requests.

"The Red Cross after many conferences decided to offer the Board of Health the services of three school nurses, supervised by a physician. The objects were two: first, to co-operate with the doctors and nurses of the Health Department, in carrying out routine measures, and, second, to try to suggest measures of improvement.

"No one has realized more acutely than the Board of Health and the School Department the inadequacy of the present means of carrying out an effective health program. One great reason for lack of support has been the confusion of public opinion in regard to conditions. It seemed to us that an outside investigation might carry weight and establish certain facts. No effort has been made to carry out any elaborate study and it should be stated that most of the facts brought out are similar to those found elsewhere, and tend to confirm conclusions already established and acted on by the Health authorities. . . .

Total	Normal	Teeth	Tons. & Adnds.	Heart	Lungs	Under Wgt.	Ortho-pedic	Pedic Capitis	Skin
2,654	814	1,237	665	34	12	205	27	432	39

"The above figures show certain definite facts. For one thing children who are acutely sick stay at home. Between the anxious parent at one end and the teacher at the other there is very little chance for the acutely ill child to continue his education. . . .

"Examination of children in the above five schools show very few acutely ill children, but a large number of defects of more or less serious type. . . .

"Cambridge is better equipped, as far as nurses go, than most cities, but entirely inadequately. The Red Cross nurses have had charge of slightly

under 1,000 children apiece and have been profitably employed. Probably a nurse to every 1,500 children could keep fairly accurate track of her work. Certainly the city should provide at least three in addition to its present staff. . . ."

JOSEPH M. WADDEN, M.D.,

(Acting) Medical Adviser.

REPORT OF THE SCHOOL NURSE

The school nurse respectfully submits her report for the year, January 1, 1919, to December 31, 1919.

The nurses worked, as in former years, directly under the Board of Health, in conjunction with the School Inspectors, and in co-operation with the School Department.

In addition to the work in the schools, and the "follow up" work in the homes and clinics, with the children, the nurses, until the first of August, did the contagious disease investigation work in their districts; in August Miss Driscoll was assigned to contagious disease investigation only.

The five nurses, employed by the Board of Health, were assisted in the school work by a nurse supplied by the Visiting Nursing Association and the Parents' Association of the Agassiz, Harvard, Lowell and Merrill Schools, who took charge of the work in these schools. The Public School Association paid for the services of a nurse in the High and Latin, and the Rindge Technical Schools, until September, when the Board of Health was enabled to provide a nurse.

In June Miss Martha D. Woodworth, the Head Nurse, who has been with the city for ten years, resigned to take the position of matron at the Plymouth County Hospital. Miss Elmira Bears, who has been in war service, resigned to become head school nurse in Louisville, Kentucky. The department thereby has lost most efficient and conscientious workers.

During the year, routine inspection was conducted in the primary and grammar schools.

All cases requiring a diagnosis were held for examination by the physicians, when, on their advice, suspicious cases and all children suffering from contagious parasitic disease were excluded, to be followed later to their homes by the nurses.

Special attention has been given to the children suffering from malnutrition, for experience has taught us that such children cannot keep pace with the other members of their class in the routine grade work. Cambridge has now three open-air schools where work is especially adapted to the needs of these children, and where, with the full co-operation of the homes, we have proven the value of early preventive treatment, for in many instances the mental as well as the physical condition has markedly improved.

A gratifying phase of the work during the past year has been

the ever-increasing interest of parents and guardians in the welfare of their children and their eagerness to carry out instructions for medical advice and treatment. When, for some good reason, parents were unable to attend to examinations or operations at the clinics, consent was obtained, and the nurses took the children for treatment.

During the summer the Open Air School resumed its sessions in the grove at Fresh Pond, with headquarters at the Haggerty School building, and about two hundred children attended. A nurse was always in attendance to look after the physical needs of the children. Classes in First Aid were held, and a "Little Mothers Class" was formed where the girls were given lessons in the care and dressing of babies.

The Board of Health succeeded in having two more nurses appointed in October, making a total of six school nurses employed by the city. The Parents' Association of the Agassiz, Harvard, Lowell, Felton, and Merrill schools in conjunction with the Visiting Nurses' Association again supplied a nurse to look after these schools with about 1,670 pupils.

The Red Cross offered the services of three nurses, which were accepted by the City, and in September they were assigned to the Webster, the Gore and Putnam, and the Ellis and Sleeper Schools. These districts contain about 2,840 Public School children.

The remaining elementary schools, eighteen in number with a school population of about 8,375 pupils, are covered by four nurses with an average of about 2,090 children each.

Each year the field of labor has broadened and many and varied are the duties of the nurses whose work is largely educational, both in school and home, and based on a two-fold foundation—the prevention of contagion and disease, and the maintenance of the efficiency of the child's school life.

Thanks are tendered the members of the School Department and to the School Inspectors for their unfailing courtesy, and also the various charitable organizations of the city for the ever ready response to the call for aid for the school children of Cambridge.

REPORT FOR YEAR ENDING DECEMBER 31, 1919

BOARD OF HEALTH NURSES

Home Calls

Malnutrition	200	Pediculosis	265
Defective vision	632	Rachitis	8
Strabismus	28	Cardiac	33
Blepharitis	18	Chorea	8
Conjunctivitis	4	General condition	5
Cataract	1	Rheumatism	2
Hordeolum	12	Arthritis	1
Phlyctenular keratitis	19	Debility	7
Injury to eye	1	Nervousness	6
Granulated lids	36	Headache	1
Infected eye	3	Stomach trouble	1
Question of glasses	20	Indigestion	5
Defective hearing	42	Fainting cases	2
Otitis Media	76	Jaundice	1
Impacted wax	1	Appendicitis	4
Adenoids and tonsils	415	Epilepsy	2
Adenoids	43	Diarrhea	1
Enlarged tonsils	134	Hernia	3
Peri tonsillar abscess	5	Rectal trouble	1
Sore throat	31	Involuntary micturition	4
Tonsilitis	31	Orthopedic	10
Colds	66	Faulty posture	4
Coryza	6	Scoliosis	2
Nasal obstruction	22	Dislocated shoulder	1
Chronic nasal discharge	1	Fractured arms	7
Bronchitis	12	Strained ligaments	5
Laryngitis	11	Injured knees	2
Pharyngitis	1	T. B. hip	1
Lung condition	1	Infected foot	1
Tubercular glands	1	Flesh wound	1
Asthma	4	Infected fingers	3
Enlarged glands	13	Infected ankles	7
Adenitis	8	Abscess on knee	1
Empyema	1	Abrasion	1
Pneumonia	13	Injury to finger	1
Influenza	109	Abrasion on hip	1
Anemia	19	Faulty articulation	2
Dental caries	690	Unkempt conditions	10
Ulcerated tooth	2	Dog bite	1
Alveolar abscess	4	Paralysis	1
Impetigo	111	Cigarette smoker	1
Scabies	67	Mentally deficient	10
Eczema	49	Masturbation	3
Ring worm	14	Unhygienic condition	3
Alopecia	8	Investigations	25
Warts	1	Questionable diagnosis	32
Furuncle	2	Pre-tubercular	5
Boils	2	Permits for school	6
Sores	10	Auto accidents	2
Sores on face	20	Mumps	7
Herpes	1	Whooping cough	3
Abscess	3	Scarlet fever	2

Whooping cough suspects	6	Cultures taken	4
Chicken pox suspects	3	T. B. knee	5
Mumps suspects	9	Sprained ankle	1
Sputum specimens	3		

Totals

Number of home calls recorded	3,576
Number of home calls unrecorded	387
Number of children taken to clinics	3,899
Number of children held for inspectors	6,190
Number of notes sent home	715
Number of home treatments	5
Number of calls on contagion, January 1st to August 1st, 1919	1,158

RED CROSS NURSES (SEPTEMBER TO DECEMBER, 1919)

(Putnam, Gore, Webster, Ellis, and Sleeper Schools)

Home Calls

Tonsils and adenoids	83	Keratitis traumatic	5
Enlarged tonsils	10	Dental caries	182
Adenoids	4	Toothache	1
Tonsilitis	18	Abscess on tooth	4
Sore throat	25	Epilepsy	1
Colds	10	Mentally deficient	3
Bronchitis	5	Rachitis	1
Malnutrition	9	Acute indigestion	1
Cardiac	22	Indigestion	2
Rheumatism and cardiac	3	Hygiene	4
Rheumatism	4	Fits	3
Chorea	2	Constipation	1
Referred to Open Air School	7	Gland in axilla	4
Defective hearing	3	Bruised leg	1
Otitis media	45	Infected knee	1
Pediculosis	68	Infected hand	2
Impetigo	46	Infected finger	1
Scabies	5	Infected foot	2
Sore on head	1	Abscess on neck	8
Herpes	3	Abscess on leg	1
Skin	5	Boil on foot	1
Tinea favus	8	Cut on face	1
Furunculosis	1	Cut on foot	1
Infected wart	1	Pneumonia	1
Eczema	3	Hernia	1
Desquamation	1	T. B. knee	1
Vaccination	12	T. B. peritonitis	3
Sore from vaccination	1	T. B. finger	4
Defective vision	49	Nasal discharge	9
Sty	2	Investigation	49
Astigmatism	11	Needle in leg	1
Blepharitis	3	Out of school	1
Conjunctivitis	6	Crushed toe	1
Keratitis	1	Question of kidneys	4
Strabismus	4	Orthopedic	14
Injury to eye	3	Flat foot	8
Wearing glasses	3	Broken arm	1
Keratitis interstitial	2	Old skull fracture	2

Ptomaine	1	Suspect whooping cough	1
Suspicious rash	4	Whooping cough	1
Diphtheria	1	Mumps	2
Suspect chicken pox	7	Cough	2

Totals

Number of home calls recorded	839
Number of home calls unrecorded	163
Number of notes sent to parents	1,570
Number of children taken to clinics	767
Number of children examined by inspectors	2,490

PARENTS' ASSOCIATION (MISS COURTNEY, JANUARY 1ST TO DECEMBER 31ST, 1919)

(Agassiz, Lowell, Harvard, Merrill and Felton Schools)

Home Calls

Tonsils and adenoids	64	Colds	25
Tonsilitis	20	Anemia	10
Bronchitis	3	Indigestion	4
Caries of teeth	144	Nervousness	10
Deafness	8	Stomach trouble	2
Otitis media	4	Malnutrition	5
Defective vision	44	Abrasions	6
Granulated lids	4	Infected finger	26
Strabismus	18	Infected knee	5
Acute conjunctivitis	10	Orthopedic	9
Furuncle	10	Unkempt condition	19
Impetigo	41	Scarlet fever	1
Eczema	18	Mumps	3
Scabies	4	Chicken pox	27
Ring worm	10	Measles	10
Pediculosis	61	Whooping cough	15

Totals

Number of home calls recorded	637
Number of home calls unrecorded	74
Number of children held for inspectors	1,208
Number of children taken to clinics	502
Number of notes sent to parents	55
Number of home treatments	21
Number of children weighed and measured	600

PUBLIC SCHOOL ASSOCIATION (MISS MUNROE, JANUARY TO JUNE, 1919)

(High Schools)

Home Calls

Tonsilitis	20	Temperature with colds	12
Sore throat	38	Temperature with headache	10
Sort throat with temperature	17	Tonsils and adenoids	11
Temperature	11	Laryngitis	11

Bronchitis	13	Nausea	2
Catarrh	4	Indigestion	13
Asthma	2	Appendicitis	9
Colds	3	Fainting cases	9
Nose bleeds	7	Hemorrhoid	1
Nasal septum	4	Question of tuberculosis	3
Defective vision	30	Abrasion	10
Conjunctivitis	5	Sprained ankle	7
Dental caries	12	Sprained wrist	5
Acne	1	Sprained hip	5
Herpes	2	Fractures	3
Eczema	3	Scalp wounds	1
Abscess	4	Hemorrhages	1
Carbuncle	2	Abscess in ear	3
Furuncles	11	Mastoid	1
Septic sores	4	Abscess on jaw	1
Skin sores	9	Erysipelas	1
Ring worm	1	Croup	2
Swollen glands	3	Pediculosis	7
Rheumatism	10	Unkempt condition	3
Anemia	8	Spinal curvature	7
Neuralgia	8	Blood poisoning	3
Neuritis	3	Flat foot	1
Pleurisy	2	Sleeping sickness	3
Pneumonia	4	Scarlet fever	2
Cardiac	11	Mumps	2
Nervous breakdown	12	Chicken pox	1
Pain in side	5	Diphtheria	5
Pain in abdomen	1	Influenza	135
Biliousness	13		

Totals

Number of home calls recorded	574
Number of notes sent to parents	88
Number of children sent home on account of sickness	245
Number of children examined on account of illness	80

MARY C. CHURCH, R.N.,

School Nurse.

REPORT OF INFANT WELFARE NURSES

We respectfully submit the following report of this Division for the year ending December 31, 1919.

The Infant Welfare Division, as such, was established in June, 1916, as a continuation of the former method of dispensing modified milk through the various stations during the months of July and August. As outlined in the departmental report of 1916, the milk stations were given up, and two nurses appointed to devote their whole time to the instruction of mothers in child hygiene.

Birth registration has been taken for the basis of visiting infants. With few exceptions, every baby registered in Cambridge is visited by the nurses, and kept under their supervision until one year of age, subject, of course, to non-interference with the attending physician, if any. Mothers are taught the general care of their babies, and given instruction in preparing formulas. Special attention is given to bottle fed babies. Every ophthalmia case reported to the Board of Health is visited by the nurses to ascertain if proper treatment is being given and the attending physician's orders carried out, or to see that proper hospital care is provided for babies not receiving the necessary attention at home. Many babies have been referred to this Division for follow-up work on their discharge from various hospitals and dispensaries in this immediate vicinity, and these babies have been visited by your nurses.

Owing to the fact that Miss Nelson and Miss Kenney, the regular infant nurses, were in war service over-seas, and because of the extreme shortage of available nurses, Miss Cann, formerly attached to the Neighborhood House infant station, did her best to cover the districts formerly assigned to Miss Nelson and Miss Kenney, until April 1st, when Miss Kenney resumed her work as infant nurse. Miss Nelson resigned, to become chief Public Health Nurse in Louisville, Kentucky. In August Miss Kenney was transferred to the position of School Nurse at the High Schools, and Miss Bridget Heanue, R.N., and Miss Mary MacDonald, R.N., were appointed, and began their work as infant nurses. As has been the custom for years past, the Neighborhood House Health Centre, through the Cambridge Visiting Nursing Association, has provided a nurse to cooperate with the Board of Health in the district comprising Ward 4.

The Board of Health maintains four permanent weekly clinics; one at the Community House, East Cambridge, one at the Cambridge

Field Shelter, one at Riverside House, off Putnam Avenue, and one at the Sleeper School, North Cambridge. There was a considerable decrease in the death rate of infants in 1919 over 1918 (1918 was an abnormal year, due, primarily, to influenza), and an encouraging decrease over 1917. This is as it should be; but the Infant Welfare work is only beginning to manifest itself, owing to the large number of babies to be visited, and the lack of a sufficient number of nurses to visit them often enough to do much preventive work. The greatest number of babies who die are seldom seen by your nurses, as many of their births are not reported until too late for aid from this Division. Proper and prompt registration of births would be a very great asset to Infant Welfare work, and some extra strong measures should be adopted, by the proper authority, to bring this about, as birth registration is the nucleus for all Infant Welfare work, and, therefore, a necessary adjunct in reducing infant mortality.

The following tables show the infant mortality under one year of age per thousand recorded births, and the stillbirth rate per thousand births, for the calendar year:

INFANT MORTALITY UNDER ONE (1) YEAR PER 1,000 BIRTHS

	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
No. deaths...	327	340	294	275	244	243	243	205	303	205
Rate	122.6	116.0	100.1	89.8	78.4	78.5	77.9	62.7	92.4	62.9

STILLBIRTHS PER 1,000 BIRTHS

	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
No. deaths...	84	89	93	99	102	117	100	123	103	98
Rate	31.5	30.4	31.6	32.3	32.7	37.8	32.1	37.1	31.4	30.1

The following is a report of the clinics:

BABY CLINICS 1919

Sleeper School	No. clinics 48	Attend. 383
Cambridge Field Shelter	No. clinics 48	Attend. 534
Riverside Neighborhood House	No. clinics 50	Attend. 871
Community House (opened Nov. 7, 1919)	No. clinics 7	Attend. 85
Totals	153	1873
Total attendance for 1918		780
Attendance for January, 1919		79
Attendance for December, 1919		159

It is interesting to note that the attendance at the Baby Clinics has increased about 100 per cent in comparison to 1918, even though it

is considered that the clinics were not held during a period of about eight weeks in 1918, owing to influenza epidemic.

The following figures present a consolidated report of the nurses for the year:

Birth reports transmitted by City Clerk		3259
No. babies on visiting list January 1, 1919	996	
No. babies (new) added during year	901	
Total babies on visiting list for year		1897
Home visits made during year	5101	
No. babies sent to hospitals	13	
No. babies on visiting list who died	30	
No. babies discharged from visiting list	237	
No. ophthalmia neonatorum cases visited	22	
No. suppurative conjunctivitis cases visited	14	
Total deaths under one during year	205	
Total stillbirths during year	98	
No. babies who died during first month	57	
No. babies who died during first 24 hours	81	
Total babies on visiting list January 1, 1920		1660

The nurses are very grateful to the various social agencies, and to those private individuals who have materially aided in our work, and the Department is grateful to Doctors Walter C. Feeley, Mary T. Mernin, John J. Murphy, Henry J. Cabeceiras, Samuel Chalfen, Samuel A. Clement, Morgan Hanlon, Joseph M. Wadden, and John H. Taylor, Jr., for their gratuitous services at the clinics.

It is respectfully recommended that provision be made for at least two additional nurses in this work, which would make it reasonably possible to visit the cases needing attention more frequently, instead of, as at present, being able to visit regularly only the urgent cases, and subsequently visiting the less urgent when possible.

Respectfully submitted,

*CLARA M. CANN, R.N.,
†MARY A. KENNEY, R.N.,
BRIDGET A. HEANUE, R.N.,
MARY A. MacDONALD, R.N.

* Resigned April 1st, 1919.
† Transferred to School Nurse August 18, 1919.

REPORT OF THE CONTAGIOUS DISEASE NURSE

The undersigned respectfully submits the following report for the period August 1—December 31, 1919:

The general health of any community is advanced in two ways; by affording the citizens proper protection against disease and by taking proper measures to repress outbreaks when once noted. Both functions fall under the supervision of the Health Department.

In the repression of communicable diseases and epidemics, proper isolation is a prime essential. In all cases where such precaution is necessary, homes have been visited, instruction as to the proper method of keeping isolation has been imparted and insistence has been made that both members of the family and others be denied admission within the area of isolation.

To insure the observance of health rules, homes have been regularly visited. The following tabulation shows the number of visits made, also the number of cases and nature of the diseases which have been referred to or have fallen under my observation during the period noted above:

VISITS

Number of Calls	1,518

NATURE OF DISEASE

Scarlet Fever	83
Diphtheria	129
Septic Sore Throat	4
Typhoid Fever	9
Measles	91
German Measles	6
Mumps	159
Chicken Pox	150
Whooping Cough	213
Infectious Diarrhea	2
Gonorrhea	1

ANNA B. DRISCOLL, R. N.,

Contagious Disease Nurse.

INSPECTION OF MILK AND VINEGAR

I respectfully submit the following report from the Department of Milk and Vinegar for the year 1919:

The number of samples collected and examined was as follows:

Number of samples from wagons	1,848
Number of samples from stores	895
Number of samples brought in by milkmen and citizens	70
Number of samples examined bacteriologically	884
Total milk samples	3,697
Number of vinegar samples	119
Number of butter samples	146
Number of ice cream samples	20
Number of cream samples	105
Number of sediment tests on milk	124
Total samples other than milk	508
Total samples examined	4,205

Six hundred sixty-five more samples were examined than during 1918.

The average quality of the milk for the last five years was:

	1919	1918	1917	1916	1915
Milk solids	12.28	12.21	12.33	12.51	12.43
Milk fat	3.60	3.75	3.63	3.62	3.64

The Massachusetts standard for milk is not less than 12.00 per cent milk-solids, and not less than 3.35 per cent milk fat. The above table indicates that the average quality of the milk tends to approach nearer to the minimum set by the statute requirement. This is due to two major factors. Firstly, that the Holstein type of cow is gradually replacing the other breeds which yield milk that is richer in solids and fat. Secondly, that a small amount of skimming, which occurs between the cow and the consumer, seems, at present, to be inevitable.

The average fat content of milk from stores was 3.58 per cent, and from dealers 3.60 per cent. The working of the small package or bottle regulation continues to be satisfactory, particularly in that part of the milk distribution handled by stores.

Notices concerning failure of milk samples to conform to the statute requirements were sent out in 178 cases.

Licenses for the sale of milk were issued to 67 wagon operators, and to 555 storekeepers. The latter figure is 48 more than in 1918,

and indicates that many storekeepers who went into war work are now returning to the business of shopkeeping.

The work of previous years directed toward the elimination of visible dirt from the milk supply has been fruitful, and the condition of the supply, as now presented, is fairly satisfactory. This is especially true of the large dealers. The small dealers now furnish an amount of trouble far too great for the amount of milk that they distribute. It is hoped that they will co-operate in helping the department to reduce this objectionable feature to an entirely negligible amount.

The use of unclean milk bottles, as containers of milk, has been troublesome. Constant care in the inspection of the filling of bottles, by the dealer, is necessary in order to reduce this nuisance. Practically, the situation is a difficult one for the dealers, and yet we must insist that only clean containers be used for milk. Often a bottle which looks clean when washed will appear dirty on the inside, and in fact be so, when viewed against the white background afforded by the milk. Much of the difficulty is caused by householders not washing the bottle at once after emptying it; some trouble is caused by the initial faulty washing of new bottles, and much by failure to properly wash bottles retrieved from the dump or from junk dealers. Bottles of the last type are the dirtiest. To correct the trouble, the consumer must be educated to do his part, and the dealer must be forced, by court action if necessary, to do his share, for finally the law makes him the insurer of his supply.

The results of the examination of milk for bacteria were as follows:

Bacteria per cubic centimeter, 100,000 and less	52%
Bacteria per cubic centimeter, over 100,000 and less than 500,000	22%
Bacteria per cubic centimeter, over 500,000	15%
Bacteria indeterminate	11%

This Department has frequently urged that the pasteurization of all milk be made compulsory, and it vigorously repeats this recommendation. No raw milk is safe. The most expensive, and the most well protected, raw milk is potentially a menace. No better argument in support of this contention exists than a brief recital of nearby history. Only a few years ago, an epidemic of septic sore throat, resulting in the serious illness of about 70 persons, and in the death of several, was conclusively traced to one milk supply. It was a raw milk, and

was supposed to be as good as could be obtained. It was expensive. It was advertised as protected by constant medical supervision. It was supposed by the public to be the "last word" in good raw milk. Bacteriological examination of the market product disclosed that it contained pus and streptococci. Examination of the herd by a skilled veterinarian showed only normal, healthy cows. Bacteriological examination of the milk from each cow showed one cow which gave milk contaminated by the dangerous organisms. Thus, although examination of this cow by a skilled veterinarian resulted in the decision that it was a healthy animal, yet bacteriological test of the milk showed that in fact it was produced by a sick and diseased cow. To settle the matter an autopsy was made, and the cow was found to have a tuberculous udder. The milk from this cow was, as is customary, mixed with that of the rest of the herd, and thus the entire output became dangerous. Had the product, though containing organisms dangerous to human health, been properly pasteurized, it would have been rendered safe. This is not an isolated case. It is a yearly occurrence somewhere around us and we may be next. One cannot always trace the trouble directly to the source. But no case of disease was ever traced to properly pasteurized milk. Furthermore, pasteurized milk is more easily digested than raw milk, because of the finely divided condition of the curd as formed in the stomach, and the anti-scorbutic properties of raw milk, which pasteurized milk is said not to possess, although this contention can be considered as not conclusively proven, may be readily and safely supplied by fruit juices. Raw milk is not safe! Properly pasteurized milk is the only safe milk!

Milk must be kept at a low temperature at all times in order to be of low bacterial count and of good quality. On the small farms, from which source about 70 per cent of the entire milk supply is drawn, ice is seldom used, but the animal heat is usually withdrawn from the milk by immersing the filled cans in tubs of water. If ice is placed in the water, more rapid chilling takes place, and the more rapid the chilling and the lower the final temperature, the better is the condition in which the milk leaves the farm. The ideal condition is to start clean milk, in clean containers, rapidly chilled to a temperature below 45°F., and keep it so. But then comes railroad transportation. The prevailing conditions, whereby the men in charge of the milk cars are employees of the railroad company, are not satisfactory.

It is essential that milk, in transportation, be kept well iced. This is frequently not done properly, and much milk arrives at the milk terminals in an unsalable condition for this reason. These men are destructively independent. They should be within the control of, and for failure to properly ice milk in their cars, should be subject to enforcement by those interested in keeping the milk cold. Fundamentally, the most interested parties are the consumers; practically it is those to whom is delegated the enforcement of health laws. This unsatisfactory condition may be remedied by proper legislation, and such legislation is earnestly recommended.

Condensed milk, both sweetened and unsweetened, is often looked upon with suspicion by the consumer, because of certain physical conditions which seem to him to be abnormalities. One subject which is the cause of complaints received by the Milk Inspector is the brown color of the product. This color is caused by the milk, during the process of condensation, being for a time subjected to a temperature higher than planned. This causes a partial caramelization of the milk-sugar. A second cause of complaint is the gritty particles sometimes found on the bottom of the contents of the can. Some consumers have complained that these particles were ground glass. This condition is caused during process of manufacture, when the evaporation of the milk is carried beyond that point where all the soluble ingredients can continue to be held in solution in the amount of water then present. On cooling, the supersaturated condition of the evaporated product is reduced to saturation by the precipitation of the excess in the form of these gritty particles. Chemically, the particles are either sugar of milk alone or associated with phosphate. Both the brown color and these gritty particles are perfectly harmless, and are not caused by adulteration.

Ice-cream

No violations of the statute requirements were found.

Vinegar

Forty-two more samples were examined than in 1918. No violations of the law were found.

Butter and Oleomargarine

Licenses were issued to 75 dealers in oleomargarine. This is twenty more than in 1918, and sixty-four more than in 1916, when

only eleven licenses were requested. These figures may be taken as fairly measuring the extent of the increased demand for oleomargarine, as a substitute for butter. During the past year butter has continued to be at a record breaking price level, and this fact has been reflected in the increased demand for butter substitutes. These have continued to be of good quality, and deserving of even more extensive use. It should be borne in mind that only pasteurized butter can compare with the government inspected oleomargarine in cleanliness, and not all butter is pasteurized. One hundred forty samples were examined and no violations of the law were found.

WILLIAM A. NOONAN, M.D.,

Inspector of Milk and Vinegar.

INSPECTOR OF SLAUGHTERING AND PROVISIONS

The undersigned respectfully submits his report as Inspector of Slaughtering and Provisions for the year ending December 31, 1919:

Veal slaughtered	2,347	
Poultry slaughtered	8,570	
Veal condemned	104	
Poultry condemned	420	pounds

MARKET PRODUCTS CONDEMNED

Beef	1,327	pounds
Lamb	450	"
Pork	527	"
Poultry	284	"
Cod, halibut, etc	587	"
Lobsters	227	"
Clams and oysters	4	gallons
Clams and oysters in shell	6	bushels

FRUIT CONDEMNED

Strawberries	134	boxes
Grapes	4½	bushels
Cantaloupe melons	11	crates
Pears	6	bushels
Peaches	4	"
Oranges	32½	dozen
Cranberries	½	bushel
Raspberries, blackberries and blueberries	64	quarts
Watermelons	37	

VEGETABLES CONDEMNED

Cabbage	1½	barrels
Potatoes	78	bushels
Sweet Potatoes	½	barrel
Asparagus	8	bushels
Squash	6½	barrels
Spinach and other greens	28	bushels
Celery	2	boxes
Corn	51	bushels
Olives	1½	barrels

MISCELLANEOUS PRODUCTS CONDEMNED

Eight persons were complained of at Third District Court, and all found guilty for selling unwholesome food.

JOSEPH L. JOHNSON,

Inspector of Slaughtering and Provisions.

VIOLATIONS OF REGULATIONS, NUISANCES ABATED, LICENSES GRANTED, ETC.

Water-closets—offensive and defective:	
Filthy bowls	171
Leaking bowls	42
Broken bowls	25
Obstructed soil-pipes	59
Defective soil-pipes	76
Defective tanks	21
Defective traps	50
Closets not supplied with running water	139
New closets installed	16
New bowls installed	38
Defective supply-pipes (from tank to bowl)	41
Sinks—offensive and defective (including wash-bowls, bath tubs and set-tubs):	
Filthy basins	18
Leaking basins	28
Defective traps	46
Defective drains	65
Obstructed drains	54
Untrapped drains	7
New sinks installed	6
Obstructed and defective house-drains	33
Offensive cesspools cleaned and removed	19
Offensive privy-vaults removed	10
Defective ice chest connections	7
Defective lunch cart connections	3
Defective barber shop connections	9
Wet and damp cellars remedied	84
Water in light wells	5
Stagnant water on premises removed	52
Stagnant water in streets and gutters removed	24
Dirty yards cleaned	497
Dirty roofs cleaned	18
Dirty buildings cleaned	18
Dirty light wells cleaned	42
Dirty cellars cleaned	266
Dirty sheds cleaned	17
Dirty stores cleaned	20
Dirty hen-coops cleaned	51
Dirty stables cleaned	29
Uncovered manure pits properly covered	23
Manure pits repaired, and new pits built	23
Manure in yards and lots removed	27
Vacant lots cleaned	40
Defective, or lack of stable connections (gutters, traps and drains)	14
Defective stable floors repaired	20
Filthy garbage receptacles cleaned	174
Filthy garbage bins cleaned	98
New garbage receptacles provided—with covers	245
New garbage-receptacle covers provided	112
Dead animals removed	74
Fowl removed from dwelling-houses (cellars, attics, etc.):	
Number of houses	34
Noisy roosters removed	139
Bakeries cleaned and whitened	18

Unsanitary dwellings vacated	10
Unsanitary stables vacated	10
Unsanitary barber-shops vacated	1
Plumbing tests made (peppermint and blueing)	17
Stables occupied without license	16
Keeping hens without license	85
Keeping pigeons without license	16
Keeping hogs without license	34
Hearing notices posted	252
Hearings advertised in public press	25
Legal orders served	275
Houses disinfected	543
Public sanitaries—inspections and cleanings	494
Public sanitaries repaired	6
Inspections by sanitary inspectors	17,511
Subsequent inspections by sanitary inspectors	6,309
*Complaints received by inspectors through office	462
Complaints received by inspectors outside office	277
Complaints received and investigated—No cause	77
*Complaints received and investigated—Nuisance abated	734
Contagious cases investigated and histories obtained:	
Diphtheria	249
Scarlet Fever	190
Typhoid Fever	14
Septic Sore Throat	10
Measles	264
German Measles	22
Mumps	266
Chicken Pox	370
Whooping Cough	432
Epidemic cerebro-spinal meningitis	5
Trachoma	4
Dysentery (Bacillary)	2
Influenza	1,265
Houses placarded (for diphtheria and scarlet fever)	242
Hearings given:	
On applications to keep horses	24
On applications to keep hens	271
On applications to keep pigeons	11
Permits granted:	
Stables—cows	16
Stables—horses	22
Hens	237
Pigeons	14
Licenses granted:	
Undertakers	58
Manicure and massage	32
Rummage sales	15
Collect and cart grease	19
Collect and cart manure	28
Cart garbage	5
Denatured alcohol dealers	24
To fill premises	3
To distribute free samples of medicine	1

*Numerical difference between complaints investigated (abated), and complaints received, is due to unabated nuisances brought forward from previous year.

Premises approved as suitable:	
Day Nursery	1
To board infants	29
To maintain lying-in hospitals	4
To slaughter cattle	3
Permits issued for burial and removal of dead bodies:	
Died in Cambridge	1,574
Died outside of Cambridge	61
Disinterments	31
Patients removed to hospitals:	
To Massachusetts Homeopathic Hospital, Brighton	178
To Tuberculosis Hispital, Concord Avenue	35
To Holy Ghost Hospital, Cambridge Street	1
To Cambridge City Hospital, Cambridge Street	5

Respectfully,

JOHN D. CROWLEY,

Clerk.

REPORT OF THE SUPERINTENDENT OF THE CAMBRIDGE WATER WORKS

April 1, 1920.

To the Honorable Water Board of the City of Cambridge,

Gentlemen:—The annual report of the Superintendent's Department from April 1, 1919, to March 31, 1920, is respectfully submitted.

PUMPAGE

This year's pumpage has increased over last year's, 90,185,100 gallons, or 217,211 gallons daily.

Our daily average "Pumpage" per capita was 94.89.

Our daily average "Consumption" per capita was 90.06.

Comparison of Pumpage

	Pumpage for year ending March 31, 1920	Pumpage for year ending March 31, 1919	Increase	Decrease
	Gallons	Gallons	Gallons	Gallons
	1919	1918		
April	305,541,000	311,145,900	.....	5,604,900
May	334,324,400	340,417,600	.....	6,093,200
June	332,786,800	336,388,800	.....	3,602,000
July	331,120,500	335,983,200	.....	4,862,700
August	318,652,400	331,927,200	.....	13,274,800
September	304,317,000	314,379,200	.....	10,062,200
October	310,037,700	322,600,000	.....	12,562,300
November	291,833,600	307,227,000	.....	15,393,400
December	347,051,600	328,820,600	18,231,000	.....
	1920	1919		
January	398,242,400	348,340,000	49,902,400	.....
February	358,136,000	305,012,600	53,123,400	.....
March	358,458,800	318,075,000	40,383,800	.....
Total	3,990,502,200	3,900,317,100	90,185,100	.....

Comparative Total Pumpage During the Past Twelve Years.
Fiscal Year ends March 31

Year	Annual Pumpage	Increase or Decrease	Average Daily Pumpage	Increase or Decrease	Average Daily Pumpage per Capita	Estimated Population
	Gallons	Gallons	Gallons	Gallons	Gallons	
1909	3,692,451,980	149,718,360 decrease	10,116,307	381,426 decrease	101.00	100,000
1910	3,678,588,720	13,863,260 "	10,078,325	37,982 "	97.84	103,000
1911	3,794,689,680	116,100,960 increase	10,396,410	318,085 increase	99.16	104,839
1912	3,868,026,800	73,337,120 "	10,568,380	171,970 "	100.00	104,839
1913	3,827,528,600	40,498,200 decrease	10,486,380	82,000 decrease	95.33	110,000
1914	3,985,123,900	157,595,300 increase	10,948,142	461,762 increase	95.75	112,000
1915	3,434,421,300	550,702,600 decrease	9,409,373	1,538,769 decrease	82.53	114,000
1916	3,409,230,800	25,190,500 "	9,314,838	94,535 "	81.70	114,000
1917	3,509,464,600	100,233,800 increase	9,614,971	300,133 increase	84.34	114,000
1918	3,757,413,400	247,948,800 "	10,294,282	679,311 "	90.30	114,000
1919	3,900,317,100	142,903,700 "	10,685,800	391,518 "	93.73	114,000
1920	3,990,502,200	90,185,100 "	10,903,011	217,211 "	94.89	114,900

Total Rainfall for the Past Year.

	Fresh Pond Reservoir	Stony Brook Reservoir	Hobbs Brook Reservoir
1919	Inches	Inches	Inches
April	2.70	2.71	...
May	4.27	5.81	...
June	.67	1.39	...
July	5.19	5.75	...
August	4.16	5.49	...
September	6.06	7.42	...
October	1.94	2.24	1.96
November	5.06	5.94	4.82
December	1.61	2.06	1.85
1920			
January	2.46	3.32	2.85
February	7.50	5.30	5.69
March	3.58	3.90	4.20
Total	45.20	51.33	21.37

Total Rainfall for the Past Twelve Years.

	Fresh Pond Reservoir	Stony Brook Reservoir	Hobbs Brook Reservoir
	Inches	Inches	Inches
1909	30.67	34.87	34.77
1910	34.97	37.83	35.08
1911	28.86	31.78	28.26
1912	35.60	42.63	39.90
1913	30.58	41.22	40.26
1914	39.24	42.13	40.71
1915	31.11	34.44	33.02
1916	39.70	41.90	45.32
1917	37.45	37.11	35.88
1918	38.14	38.69	34.84
1919	36.81	41.24	39.87
1920	45.20	51.33	21.37*

* For six months only.

PUMPING STATION

The consumption this year has been pumped by the Leavitt Engine No. 7.

The daily average pumping time was 13.57 hours.

The amount of coal used was 20% less than last year.

Because of the uneasiness felt by some consumers in regard to the quality of the water during the spring we installed in the Pumping Station at Fresh Pond, a Wallace Tiernan Company Chlorinator and pending the building of our Filtration plant, we will use it as required.

	RUNNING TIME			PUMPAGE		COAL CONSUMED		Rainfall	Average Height of Pond
	Engine No.	Total	Daily Average	Total	Daily Average	Total	Daily Average		
		Hours	Hours	Gallons	Gallons	Pounds	Pounds	Inches	Feet
1919									
April	7	381	12.70	305,541,000	10,184,700	512,900	17,096	2.70	16.80
May	7	416.75	13.44	334,324,400	10,784,658	530,900	17,125	4.27	16.89
June	7	414.50	13.78	332,786,800	11,092,893	477,800	15,926	.67	16.66
July	7	411	13.25	331,120,500	10,681,306	456,200	14,716	5.19	16.53
August	7	395.75	12.76	318,652,400	10,279,109	435,000	14,032	4.16	16.40
September	7	380.75	12.96	304,317,000	10,143,900	435,200	14,506	6.06	16.90
October	7	386.50	12.47	310,037,700	10,001,216	441,700	14,248	1.94	16.51
November	7	363.75	12.12	291,833,600	9,727,786	427,600	14,253	5.06	16.72
December	7	433.75	13.99	347,051,600	11,195,212	501,500	16,177	1.61	16.36
1920									
January	7	494.50	15.95	398,242,400	12,846,529	564,300	18,023	2.46	15.49
February	7	444.50	15.25	358,136,000	12,349,517	511,700	17,644	7.50	15.36
March	7	444.50	14.33	358,458,800	11,563,187	508,100	16,390	3.58	16.35
Total		4,967.25		3,990,502,200		5,802,900		45.20	
Daily Average			13.57		10,903,011		15,855		16.42

FRESH POND

	Highest Elevation of Pond	Lowest Elevation of Pond	Average Elevation of Pond	Monthly Rainfall	Pumpage	Registration of Weir	No. of Days
1919				Inches	Gallons	Gallons	
April 5		16.53					
April 17	17.11		16.80	2.70	305,541,000	272,250,000	30
May 23	17.25						
May 30		16.70	16.89	4.27	334,324,400	264,250,000	31
June 3	16.80						
June 26		16.60	16.66	.67	332,786,800	336,250,000	30
July 15		16.42					
July 24	16.63		16.53	5.19	331,120,500	352,625,000	31
August 1	16.51						
August 29		16.28	16.40	4.16	318,652,400	352,625,000	31
September 1		16.35					
September 25	17.30		16.90	6.06	304,317,000	297,875,000	30
October 1	17.05						
October 13		16.27	16.51	1.94	310,037,700	311,000,000	31
November 1		16.53					
November 28	17.05		16.72	5.06	291,833,600	392,500,000	30
December 1	16.96						
December 25		15.84	16.36	1.61	347,051,600	244,750,000	31
1920							
January 1	15.85						
January 23		15.18	15.49	2.46	398,242,400	309,164,000	31
February 4		15.02					
Feburary 28	15.68		15.36	7.50	358,136,000	329,875,000	29
March 4		15.60					
March 31	16.91		16.35	3.58	358,458,800	290,750,000	31
Total.....				45.20	3,990,502,200	3,753,914 000	366
Daily average			16.42		10,903.011	10,256,595	

	Pumpage Gallons	Gallons per Capita	Stony Brook Overflow
1885	1,125,252,287	49	.....
1890	1,638,550,512	62	8,700,000,000
1895	2,190,781,892	71	5,281,900,000
1900	2,651,277,240	78	4,447,100,000
1905	3,294,159,640	92	3,148,900,000
1910	3,678,588,720	97	2,531,500,000
1915	3,434,421,300	82	3,477,200,000
1920	3,990,502,200	94	5,502,900,000

Year Ending March 31	Pumpage, Gallons	Gallons Delivered in Fresh Pond through Conduit	Overflow at Stony Brook Reservoir
1913	3,827,528,600	3,124,787,500	2,571,200,000
1914	3,985,123,900	3,254,225,000	3,022,800,000
1915	3,434,421,300	2,742,500,000	3,477,200,000
1916	3,409,230,800	3,461,000,000	2,581,900,000
1917	3,509,464,600	3,468,950,000	4,091,800,000
1918	3,757,413,400	3,694,250,000	2,386,100,000
1919	3,900,317,100	3,999,750,000	2,186,400,000
1920	3,990,502,200	3,753,914,000	5,502,900,000

OPERATING EXPENSES AT THE PUMPING STATION

April 1, 1919, to March 31, 1920.

A—Personal Service:		
1. Permanent employes	$17,123 35	
2. Transient employes:		
Coal passer	1,268 72	
Unloading coal	1,098 59	
Moving coal from side track	374 13	
		$19,864 79
B—Service Other Than Personal:		
3. Advertising and posting	$25 72	
4. Transportation of persons	40 00	
5. Cartage and freight	36 61	
9. Lighting around Pumping Station	151 38	
13. Communication	68 28	
36. Boiler inspection	5 00	
39. General Plant	3,349 49	
42. Metal sashes, etc., for windows	6,010 00	
		9,686 48
C—Equipment:		
13. Tools and instruments		109 83
D—Supplies:		
2. Food and ice	$67 67	
3. Fuel and freight	25,486 20	
8. Laundry	26 95	
16. General plant	3,581 34	
		29,162 16
		$58,823 26

LEAKAGE

There were 8,357 leaks reported during the year.

On service pipes	137
On main pipes	32
On hydrants	8
On garden hydrant	1
On gates	5
On blow-off	1
On meter	1
	185
On premises (reported by inspectors)	8172
	8357

Four of the above main pipe leaks were discovered on our conduits or pumping mains.

One on 8-in. blow-off of the 63-in. conduit at Spring Street, Watertown.

One on 30-in. conduit at River Street, Watertown.

One on 30-in. pumping main at Lake View Avenue.

One on 40-in. in Fountain Terrace at Huron Avenue.

Four leaks were caused by electrolysis, all in Broadway at or near the Boston Elevated Railway Company's "Transformer" station.

We have laid a 2-in. pipe from Pioneer Avenue, east, in the south side of Broadway, connecting all building supplies, including the "Waiting Room," and we trust that this new arrangement will end electrolysis which since our subway construction has gradually lessened until this location seems the only one affected.

MAIN PIPE

Our work on main pipe this year has been done only in locations absolutely required. We have renewed with 6-inch pipe the old mains in Chestnut, Henry and Sidney Streets—in all about 1387 feet.

The 4-inch pipes in these locations were old—forty years and over—and not large enough for the increasing demand.

Main Pipe Extensions and Renewals During the Year Ending March 31, 1920

	Extensions		Renewals		Gates	
	Feet	Size	Feet	Size	Size	Kind
		Ins.		Ins.	Ins.	
Bay State Road from Concord Ave	21	6				
Bay State Road extension from above	178	8				
Bay State Road 50 feet from New St					8	
Broadway from Pioneer Ave. to B. E. R. Co. waiting room	75	2				
Cambridge Street at Webster Ave					10	Coffin
Chestnut Street from Waverly to Sidney St			206	6		
Chestnut Street from Waverly to Sidney St	252	6				
Chestnut Street at Sidney, west					6	Kelley
Chestnut Street at Sidney, east					6	Kennedy
Chestnut Street at Waverly, west					6	Smith
Chestnut Street on hydrant at Waverly St					6	Kelley
Elmwood Avenue at Brattle St			26	12		
Fifth Street from Potter St	90	8				
Fifth Street at Potter St					6	W. W. E.
Fifth Street from Munroe St	48	8				
Fifth Street at Munroe St					8	Kennedy
Harvey Street from extension from Chilton St., west	410	6				
Harvey Street at Railroad Crossing, east					6	
Harvey Street 9 ft. east from hydrant at Chemical Co					6	
Henry Street connecting Sidney St	216	6				
Henry Street to Brookline St			515	6		
Henry Street at Brookline St					6	Kelley
Henry Street at Sidney St					6	Kennedy
Henry Street at Chestnut St					6	Kennedy
Lawn Street from May St. to Cushing St	537	6				
Lawn Street at Cushing St					6	Kennedy
Lawn Street on hydrant 137 ft. from Cushing St.	13	6			6	Kennedy
Lever Bros., Harvard near Munson (on hydrant)	29	6			6	W. W. E.
Massachusetts Ave. from Roseland to Upland Road	543	6				
Massachusetts Ave. at 10″ at Upland Road					6	W. W. E.
Massachusetts Ave. on hydrant at Brackett Pl.					6	Smith
Massachusetts Ave. on Roseland St. con. to 10″					6	Kennedy
May St. from Lawn St. north to Lawn Ct	143	6				
May St. at Lawn Court, south					6	Kennedy
May St. on hydrant at Lawn St	15	6			6	Kennedy
Roseland Street at Massachusetts Ave					6	Kennedy
Rogers Street from Second St., westerly	287	6				
Rogers Street at Second St., west					6	Kennedy
Sidney Street from Henry St			640	6		
Sidney Street at Henry St					6	Kennedy
Sidney Street at Putnam Ave					8	Smith
Waverly Street from Chestnut tow. Henry	131	6				
Waverly Street at Chestnut St					6	Kennedy
Whitney Ave. from Chestnut to Putnam Ave	332	6				
Whitney Ave. at Chestnut St					6	Kelley
Whitney Ave. at Putnam Ave					6	W. W. E.
Whitney Ave. on hydrant	16	6			6	Kelley

Main Pipe Laid During Year

	12 Inch	10 Inch	8 Inch	6 Inch	4 Inch	2 Inch	Total
Length in feet, of pipe (extensions)			316	2945		75	3336
Length in feet, of pipe (renewals)	26			1361			1387
Total length in feet	26		316	4306		75	4723
Number of gates		2	5	37	8	4	56
Number of hydrants							26
Number of iron boxes							61
Number of wooden boxes							7

In Chestnut, Henry and Sidney Streets the old 4-inch pipes have been replaced with 6-inch.

Some of these old pipes were 49 years old.

I would recommend that sufficient appropriation be made this coming year, to clean the old Broadway 20-inch main and as much of the old main pipes as possible.

This year we have cleaned 34,793 feet, in sizes from 8-inch to 20-inch inclusive.

To date we have cleaned 10 miles of main pipe.

SUPPLIES

One hundred three (103) supplies have been laid this year.

Seventy-eight (78) of lead-lined iron pipe, two (2) of galvanized pipe and twenty-three (23) of cast iron pipe.

One thousand four hundred sixty-seven (1467) supplies have been cleaned.

SUPPLIES CLEANED

Year ending March 31, 1912	159
" " " " 1913	278
" " " " 1914	471
" " " " 1915	727
" " " " 1916	841
" " " " 1917	896
" " " " 1918	825
" " " " 1919	1,158
" " " " 1920	1,467
Total	6,822

Twenty-three (23) large supplies were laid during this year.

Blake & Knowles Mfg. Co.	Fifth & Munroe Sts.	4-inch
Boston Confectionery Co.	State St.	6-inch

Cambridge Electric Light Co.	Blackstone St.	4-inch
Cambridge Gas Light Co.	Potter St. (Fire)	6-inch
Cambridge Gas Light Co.	Third St. (In yard)	4-inch
Carr Fastener Co.	Ames St. (Fire)	6-inch
Dewey & Almy Chemical Co.	Harvey St.	6-inch
James J. Graham & Co.	Otis St. (Fire)	6-inch
Harvard University (Drill Hall)	Oxford St. (Fire)	6-inch
Harvard University (Research Lab.)	Hammond St.	4-inch
Harvard University (Gymnasium)	South St.	4-inch
Lever Bros.	164 Broadway	6-inch
Lever Bros.	Harvard St., near Burleigh St.,	4-inch
Lever Bros.	55 Harvard St.	6-inch
Fred K. Murray	Vassar St.	4-inch
*National Casket Co.	Bent St. (Fire)	6-inch
Page & Shaw	Ames St.	4-inch
Payne & Company, F. S.	Richdale Ave. (Fire)	6-inch
Reardon & Sons, Corporation, John	Waverly St. (Fire)	8-inch
Riverside Boiler Works	Main St. (Fire)	6-inch
Rosen, Henry	291 Prospect St. (Elevator)	6-inch
Standard Oil Company	Fifth St.	4-inch
Superior Laundry Company	Rogers St.	4-inch

FIRE SUPPLIES

Eight fire supplies have been laid during the year.

The following list contains the number of unmetered (except where specified) fire supplies in commission at this date.

Allen & Endicott Building Co.	63 Albany Street	6-in.
American Rubber Co.	Binney Street	6-in.
American Rubber Co.	Potter Street	6-in.
American Circular Loom Co.	Clarendon Avenue	6-in.
American Circular Loom Co.	Tannery Street (metered)	2-in.
Ashton Valve Co.	161 First Street	6-in.
Associated Trust	888 Massachusetts Avenue	2-in.
Barber Asphalt Paving Co.	First Street	6-in.
Bell Confectionery Co., J. S.	Sixth Street	6-in.
Blacker & Shepard Co.	Osborn Street (metered)	1½-in.
Blake & Knowles Steam Pump Wks.	Binney Street	8-in.
Blake & Knowles Steam Pump Wks.	Binney Street	6-in.
Blake & Knowles Steam Pump Wks.	Third Street	4-in.
Blanchard Machine Co.	State Street	6-in.
Boston Book Binding Co.	21 Mt. Auburn Street	6-in.
Boston Book Binding Co.	21 Mt. Auburn Street	4-in.
Boston Confectionery Co.	814 Main Street	6-in.
Boston Confectionery Co.	29 State Street	6-in.
Boston Elevated Railway Co.	Bennett Street	4-in.
Boston Elevated Railway Co.	Baldwin Street	4-in.
Boston Elevated Railway Co.	Massachusetts Avenue	4-in.
Boston Elevated Railway Co.	Mt. Auburn Street	2-in.
Boston Elevated Railway Co.	Mt. Auburn Street	4-in.
Boston Elevated Railway Co.	Murray Street	4-in.
Boston Elevated Railway Co.	Murray Street	6-in.
Boston Elevated Railway Co.	River Street	4-in.
Boston Elevated Railway Co.	University Road	8-in.

*6-in. main in street now a fire supply.

Boston & Maine Railroad	Bridge Street	6-in.
Boston & Maine Railroad	East Street	6-in.
Boston & Maine Railroad—In Yard—Four Cambridge Hydrants.		
Burke, Thos. F.	881 Massachusetts Avenue	2-in.
Cambridge Electric Light Co.	Western Avenue	6-in.
Cambridge Gas Light Company	Potter Street	6-in.
Cambridge Gas Light Co.	Third Street	6-in.
Cambridge Gas Light Co.	Second Street	6-in.
Cambridge Mutual Fire Insurance Co.	Mass. Avenue (metered)	2-in.
Carr Fastener Co.	27 Ames Street	6-in.
Carr Fastener Co.	31 Ames Street (fire curtain)	6-in.
Carr Fastener Co.	43-5 Amherst Street	6-in.
Carter Ink Co.	First Street (metered)	4-in.
Carter Ink Co.	Athenaeum Street	6-in.
Climax Paper Box Co.	20-24 Cottage Park Avenue	4-in.
Close, George	Broadway	6-in.
Columbia Jewelry Co.	Camp Street	6-in.
Commonwealth Custom Laundry	348 Franklin Street (metered)	4-in.
Corcoran, John H.	631-637 Mass. Avenue	6-in.
Corcoran, Joseph F.	62 Albany Street	6-in.
Davenport, A. H.	Cambridge Street	6-in.
Davenport, A. H.	Otis Street	6-in.
Dodge Motor Vehicle Co.	29 Landsdowne Street	6-in.
Dover Stamping & Manufacturing Co.	Pleasant Street	6-in.
Dow Co., John C.	220 Portland Street (metered)	2-in.
E. & R. Laundry Co.	Mass. Avenue	6-in.
Elliot Addressing Machine Co.	147-153 Albany Street	6-in.
Eustis Manufacturing Co., J. P.	12-16 Ames Street	6-in.
Flash Chemical Co.	Second Street	6-in.
Furbish, Fred B.	41 Church Street	4-in.
Ginn & Co.	First Street	6-in.
Ginn & Co.	Athenaeum Street	Two 6-in.
Goepper Brothers	Ninth Street (metered)	1½-in.
Govern, Anthony	881 Mass. Ave. (metered)	2-in.
Graham & Company, James J.	Otis Street	6-in.
Gray, Peter & Sons	Third Street	6-in.
Harvard University	"Austin" Hall	6-in.
Harvard University	Harvard Union	4-in.
Harvard University	Jefferson Physical Laboratory	6-in.
Harvard University	Langdell Hall	4-in.
Harvard University	Memorial Hall (metered)	Two 4-in.
Harvard University	Kirkland Street (Radio School)	6-in.
Harvard University	Observatory	6-in.
Harvard University	Oxford Street (Drill Hall)	6-in.
Harvard University	Semitic Museum	4-in.
Hasty Pudding Club	Holyoke Street	4-in.
Hews Co., A. H.	Richdale Avenue	Two 4-in.
Holy Ghost Hospital for Incurables	Cambridge Street	3-in.
Houghton, Miffiin Co.	River Street	6-in.
Howe, Estate of Otis	748 Main Street	6-in.
Irving & Casson	108 Cambridge Street	6-in.
Irving & Casson	27 Otis Street	6-in.
Irving & Casson	Otis Street	Two 6-in.
Irving & Casson	Thorndike Street	Two 6-in.
Irving & Casson	Thorndike Street (metered)	2-in.
Ivers & Pond Piano Co.	Albany Street	4-in.
Ivers & Pond Piano Co.	Main Street	6-in.
Jacobs, David	37 Osborn Street	6-in.
Ladd & Barker	11 Windsor Street	6-in.

Lamb & Ritchie	Albany Street	6-in.
Lever Brothers, Ltd., Boston Works,	Harvard Street	8-in.
Lever Brothers, Ltd., Boston Works,	Harvard Street	6-in.
Lever Brothers, Ltd., Boston Works,	Broadway	6-in.
Lever Brothers, Ltd., Boston Works,	Broadway	8-in.
Lever Brothers, Ltd., Boston Works,	Portland Street	6-in.
Library Bureau	Albany Street	6-in.
Little, Inc., A. D.	Charles River Road	6-in.
Little, Brown & Co.	Putnam Avenue	6-in.
Luke, Estate of E. H.	Main Street	2-in.
Main Street Trust	Amherst Street	6-in.
Main Street Trust	Amherst Street	6-in.
Manufacturers' Bank Bldg. Trust	Main Street	6-in.
Masonic Temple	1594 Mass. Avenue	4-in.
Mason & Hamlin Co.	Broadway	Two 6-in.
McLean, Isaac	Mt. Auburn Street	4-in.
McLean, Isaac	"Brentford Hall"	4-in.
Metropolitan Storage Warehouse Co.	Mass. Avenue	6-in.
Middlesex Co., House of Correction	Second and Spring Streets	6-in.
Monk's Laundry	Norfolk Street	6-in.
Morse, Estate of A. P.	585 Mass. Avenue	6-in.
National Biscuit Company	Franklin Street	4-in.
National Biscuit Company	Franklin Street	6-in.
National Biscuit Company	Green Street	8-in.
National Casket Company	122 First Street	6-in.
National Casket Company	Bent Street	6-in.
Nichols, Annie W. H.	Ames Street	6-in.
North Packing & Provision Co.	Windsor Street	6-in.
Olympia Theatre Co., Inc.	Mass. Avenue	6-in.
Page Box Co., George G.	Hampshire Street	Two 6-in.
Payne & Co., F. S.	75 Richdale Avenue	6-in.
Payne & Co., F. S.	Richdale Avenue	6-in.
Peabody, Jr., Francis, et al	Claverly Hall	4-in.
Petterson, Oscar G.	183 Main Street	4-in.
Pierce, Trustees of the Estate of Thomas,	Broadway	6-in.
Pi Eta Club	Winthrop Square	2-in.
Poole Piano Co.	Sidney Street	8-in.
Porter, Henry S.	Kinnaird Street (metered)	4-in.
Porter, Henry S.	Kinnaird Street	6-in.
Reardon & Sons Corporation, John	Waverly Street (metered)	4-in.
Revere Sugar Refinery	Water Street	6-in.
Reversible Collar Co.	Putnam Avenue	6-in.
Rice & Hutchins, Inc.,	Landsdowne St.	6-in.
Riverside Boiler Works	Harvard Street	4-in.
Riverside Boiler Works	Main Street	6-in.
Ross & Co., William F.	201 Bridge Street	6-in.
Russell, Estate of Joseph G.	224 Albany Street	6-in.
Russell, Lucy J.	29 Elm Street (metered)	1½-in.
Sacred Heart Parish	Seventh Street	4-in.
Sawyer & Son, Howard M.	Thorndike Street	4-in.
Sawyer & Son, Howard M.	Spring Street	6-in.
Sawyer & Son, Howard M.	Second Street	6-in.
Scully, Francis P.	First Street	6-in.
Seelye, Francis P.	First Street	4-in.
Sherburne, Estate of Reuben	Third Street	6-in.
Simplex Wire & Cable Company	Auburn Street	8-in.
Simplex Wire & Cable Company	Franklin Street	6-in.
Simplex Wire & Cable Company	Pilgrim Street	4-in.
Simplex Wire & Cable Company	Sidney Street	6-in.

Southwick, Annie E.	684 Mass. Avenue	6-in.
Speare's Sons & Co., Alden	Binney Street	4-in.
Squire Co., J. P.	Gore Street	8-in.
Standard Oil Co.	Potter Street	6-in.
Standard Turning Works	Main Street	4-in.
Swan, Daniel A.	61 Broadway (metered)	2-in.
Thairwell Co., William C.	15 Tudor Street	4-in.
Thayer & Co., Henry	Broadway	6-in.
Thompson Box Co.	62 Hampshire Street	6-in.
Thompson Box Co.	69 Hampshire Street	4-in.
Thorndike School	Spring Street	4-in.
Tower & Son, Sylvester	Broadway	4-in.
University Associates	Bow Street, Garage	6-in.
University Associates	Linden Street	4-in.
University Associates	Mass. Avenue	6-in.
University Associates	Mass. Avenue	4-in.
Ward, Corby Co.	Albany Street	4-in.
Warren Brothers & Co.	Potter Street	6-in.
Youngman, William S.	Amherst Street	6-in

SUPPLIES, ETC., RENEWED DURING THE YEAR

	8 Inch	6 Inch	4 Inch	2 Inch	1½ Inch	1¼ Inch	1 Inch	¾ Inch	Total
Length in feet, of cast iron pipe	10	55	163						228
Length in feet, of galvanized pipe			13			122			135
Length in feet, of lead lined pipe				481	364	1,209	3,709	13,500	19,263
Total length, in feet, of pipe	10	55	176	481	364	1,331	3,709	13,500	19,626
Supplies renewed with cast iron pipe			6						6
Supplies renewed with galvanized pipe						3		1	4
Supplies renewed with lead lined pipe				15	14	44	107	502	682
Total number of supplies renewed			6	15	14	47	107	503	692
Number of drip valves			3	6	5	17	34	83	148
Number of corporation cocks				4	7	22	43	51	127
Number of sidewalk cocks						16	25	46	87
Number of service boxes									72
Number of gate boxes									32
Number of gates	1	8	4						13

NEW SUPPLIES LAID DURING YEAR

	8 Inch	6 Inch	4 Inch	2 Inch	1½ Inch	1¼ Inch	1 Inch	¾ Inch	Total
Length in feet of cast iron pipe	18	220	354						592
Length in feet of galvanized pipe		5	37	21					63
Length in feet of lead lined pipe				323	157	68	571	1,455	2,574
Total length in feet	18	225	391	344	157	68	571	1,455	3,229
Number of supplies, cast iron	1	10	10						21
Number of supplies, galvanized			1	1					2
Number of supplies, lead lined				5	4	3	18	49	79
Total number of supplies	1	10	11	6	4	3	18	49	102
Number of drip valves		1	7		5	4	15	50	82
Number of corporation cocks				3	3	6	19	49	80
Number of sidewalk cocks						3	15	47	65
Number of service boxes									68
Number of gates	1	8	10						19
Number of gate boxes									30

Supplies Laid During Past Nineteen Years

YEAR	New Supplies	SUPPLIES RENEWED			Total Supplies Laid	Supplies furnished with sidewalk service boxes
		Application and Leakage	Attending Main Pipe Renewal	Total Supplies Renewed		
1902.....	161	110	167	277	438	51
1903.....	123	174	163	337	460	42
1904.....	111	190	87	277	388	39
1905.....	130	176	117	293	423	177
1906.....	129	230	15	245	374	113
1907.....	135	197	18	215	350	19
*1908.....	110	267	24	291	401	116
†1909.....	29	28	...	28	57	12
‡1910.....	156	332	56	388	544	144
‡1911.....	184	352	79	431	615	131
‡1912.....	229	403	37	440	669	202
‡1913.....	289	485	56	541	830	55
‡1914.....	201	663	29	692	893	81
‡1915.....	154	437	149	586	740	83
‡1916.....	175	615	122	737	912	24
‡1917.....	178	699	95	794	972	67
‡1918.....	126	582	...	582	708	30
‡1919.....	58	637	...	637	695	61
‡1920.....	102	692	...	692	794	72

* For year ending November 30, 1908.
† For four months ending March 31, 1909.
‡ For year ending March 31.

Comparative Trenching for the Past Fifteen Years

	MAIN PIPE				SUPPLIES		TOTAL	
	Extension	Renewals	Subway Changes		New	Renewals	Feet	Miles
			New	Renewals				
1906.....	7,443	1,357	....	....	4,835	8,716	22,351	4.23
1907.....	4,377	1,964	....	....	5,433	6,461	18,235	3.45
1908.....	2,877	918	....	....	5,730	8,361	17,886	3.38
1909.....	3,068½	918	....	....	6,674½	9,312½	19,973½	3.80
1910.....	5,361½	2,952	777	6,071	6,090	11,548	32,799½	6.21
1911.....	4,092	519	2,616	4,060	6,541½	13,032	30,860½	5.84
1912.....	5,813	2,424	2,033	3,995	9,476	13,403	37,144	7.03
1913.....	16,459	6,284	50	355	11,988½	16,325	51,461½	9.74
1914.....	11,000	4,154	....	....	8,175½	19,882½	43,212	8.18
1915.....	7,273½	6,290½	....	....	6,894½	17,804½	38,263	7.24
1916.....	5,368	5,360	....	....	6,109	18,293	35,130	6.65
1917.....	11,553	3,417	....	....	6,733	20,887	42,290	8.01
1918.....	3,087	2,907	....	....	4,732	17,385	28,111	5.32
1919.....	2,694	1,779	....	....	1,891	19,829	26,193	4.96
1920.....	3,336	1,387	....	....	3,229	19,637	27,589	5.22

‡Fiscal year ends March 31.

FOUNTAINS

There are twenty-nine (29) fountains in use in the city.

The nine (9) ice water fountains as tabled, the eleven (11) fountains equipped with faucets only, as required by the Board of Animal Industry and the small drinking fountains of which there are eight (8) in use.

Those equipped with faucets only are as follows:

Brattle Square ("Gould")
Craigie Square
Kelley Square
Kendall Square
Massachusetts Avenue at Porter Square
Massachusetts Avenue at Tannery Street
Massachusetts Avenue at Washburn Avenue
Mt. Auburn Street, opposite Coolidge Avenue ("Jenks" for horse)
Norton Square
Putnam Avenue.
Wyeth Square

The following drinking fountains are in use:

Baldwin Street at Cambridge Street ("Jones" bubble)
Broadway at Norfolk Street ("Jones" bubble)
Charles River Road, East side Mass. Ave., opp. M. I. Technology (bubble)
Two (2) Fresh Pond Driveway ("Jenks" bubble)
McNamee Square ("Jones" bubble)
Mt. Auburn Street in Parkway ("Jones" bubble)
Tech Street ("Jenks" bubble)
Western Avenue ("Mill Pond Playground") ("Jenks" bubble)

ICE WATER DRINKING FOUNTAINS

The Cost of Furnishing Fountains with Ice During the Summer Months for the Past Sixteen Years.

Year	LOCATION									COST	
	Cambridge Field	Cambridge Street at Third Street	Central Square	Harvard Square	Kendall Square	Mass. Ave. at Blake St.	Mass. Ave. at Cameron St.	Putnam Square	Rindge Field	Total Cost per Year	Average Cost per Day per Fountain
1904	....	$145.50	$112.50	$105.60	...	$96.75	....	...	...	$460.35	$1.20
1905	....	125.55	129.90	103.43	...	155.30	....	...	...	514.18	.94
1906	....	180.95	175.35	166.69	...	157.25	$115.40	...	...	795.64	1.57
1907	$102.37	110.50	127.13	110.50	...	102.74	102.25	...	...	655.49	1.09
1908	89.49	127.00	134.38	127.87	...	111.50	115.75	...	...	705.99	1.04
1909	121.05	185.68	124.50	122.70	...	141.60	127.95	...	...	823.48	1.15
1910	134.10	149.70	....	134.55	...	140.25	154.05	...	...	712.65	1.24
1911	123.60	167.65	....	127.20	...	146.70	169.05	...	...	734.20	1.34
1912	120.30	134.85	108.15	120.75	...	139.95	165.00	...	$129.75	918.75	1.25
1913	135.82	174.19	175.22	138.02	...	119.22	116.33	...	112.01	970.81	.97
1914	113.77	149.57	152.88	113.78	...	64.82	74.45	...	78.41	747.68	.78
1915	89.67	120.41	109.80	83.49	...	77.09	84.44	$65.85	89.08	719.83	.74
1916	63.21	118.87	116.43	87.31	...	49.24	62.62	63.49	62.47	623.64	.79
1917	62.85	136.49	133.56	101.10	...	83.47	82.24	83.47	83.47	766.65	1.37
1918	110.45	216.52	183.35	152.29	110.45	110.45	99.88	122.10	110.45	1216.04	1.57
1919	98.00	207.51	156.40	130.34	97.21	98.00	98.00	102.71	98.00	1086.17	1.68

New Hydrants and Removals

	Installed	Removed
Austin Street at Main Street	Chapman	Chapman
Belmont Street, near Holworthy Street	Holyoke	Holyoke
Bow Street, at Linden Street	Chapman	Boston
Brattle Street, opposite 128	Chapman	Holyoke
Brookline Street, at Ford's	Chapman	Kennedy
Cedar Street, at Harvey Street	Chapman	Chapman
Chestnut Street, 50 ft. from Henry Street	Chapman	
East Street, and North Street	Chapman	Boston
Gore Street at Lambert Street	Chapman	Boston
Gore Street, between Third and Fourth Streets	Chapman	Chapman
Hampshire Street at Amory Street	Chapman	Perkins
Harvard Street, opposite 214	Chapman	Boston
Harvard Street, near Munson Street	Chapman	
Harvey Street	Chapman	
Howard Street and Grigg Street	Chapman	Chapman
Howard Street and River Street	Chapman	Chapman
Lawn Street 137 ft. from Cushing Street	Chapman	
Main Street, at Windsor Street	Chapman	Chapman
Massachusetts Avenue, near Brackett Place	Chapman	
May Street, opposite Lawn Street	Chapman	
Prentiss Street and Massachusetts Avenue	Chapman	Chapman
Portland Street and Main Street	Chapman	Coffin
River Street	Chapman	Chapman
River Street, opposite Fairmount Street	Chapman	Perkins
Whitney Avenue, 150 ft. from Putnam Avenue	Chapman	
Windsor Street, opposite 274	Holyoke	Holyoke

In use March 31, 1920:

Boston	117
Chapman	676
Coffin	41
Corey	33
Flush	3
Holyoke	167
Kennedy	87
Mathews	13
Perkins	84
	1,221

METERS

	6 Inch	4 Inch	3 Inch	2 Inch	1½ Inch	1¼ Inch	1 Inch	¾ Inch	⅝ Inch	Total
Artic	...	...	...	...	...	...	...	...	1	1
Crest	...	3	3	8	3	...	...	...	...	17
Crown	...	1	...	5	1	...	1	8	5	21
Empire	...	...	...	...	...	...	1	...	...	1
Hersey	1	2	7	46	18	3	110	277	734	1,198
Keystone	...	1	...	...	...	...	36	111	370	518
King	...	...	...	...	...	...	...	1	2	3
Lambert	...	...	...	...	...	...	3	23	105	131
Nash	...	...	...	...	...	...	...	10	2	12
Thomson	...	...	...	...	...	...	...	4	...	4
Torrent	...	...	...	7	...	...	...	...	...	7
Trident	...	...	2	6	6	1	109	253	478	855
Union Rotary	...	8	5	10	3	...	1	7	3	37
Watch Dog	...	...	...	...	...	...	...	2	21	23
Worthington	...	12	33	107	95	87	209	715	2,387	3,645
	1	27	50	189	126	91	470	1,411	4,108	6,473

Meters on School Houses, Public Buildings, Etc.

	6 Inch	4 Inch	3 Inch	2 Inch	1½ Inch	1¼ Inch	1 Inch	¾ Inch	⅝ Inch	Total
Crown	...	...	...	1	1	...	1	1	1	5
Hersey	...	...	1	...	1	...	7	5	1	15
Keystone	...	...	...	...	...	...	1	...	...	1
King	...	...	...	...	...	...	...	...	1	1
Thomson	...	...	...	...	1	...	...	...	...	1
Torrent	...	...	...	2	...	...	...	...	...	2
Trident	...	...	...	...	...	...	8	1	2	11
Union Rotary	...	...	...	2	...	...	...	...	...	2
Worthington	1	2	2	3	9	3	6	2	3	31
	1	2	3	8	12	3	23	9	8	69

METERS ON FIRE SUPPLIES

	8 Inch	6 Inch	4 Inch	3 Inch	Total
Hersey	3	34	9	5	51
Protectus	1	6	..	..	7
					58

Total number of meters in use March 31, 1920, 6600.

FIRE SUPPLY METERS

We have set two (2) meters during the year on fire supplies.

There are now fifty-six (56) of these meters in use.

They are located as follows:

Allen & Endicott Building Company, Main Street ...6-inch on new supply
Allen & Endicott Building Company, Osborne Street 6-inch on new supply
American Net & Twine Company, Second Street ....6-inch on old supply
American Net & Twine Company, Third Street .....6-inch on old supply
Baker, Brownrigg K., Osborne Street (premises) .....6-inch on new supply
Barbour Stockwell Company, Broadway (premises) ..6-inch on new supply
Blacker & Shepard Company, 80 State St. (premises) 4-inch on new supply
Blake & Knowles Steam Pump Works, Binney and ..
Fifth Streets (premises) .....6-inch on new supply
Brigham Company, C., Albany Street .....6-inch on new supply
Briggs, C. A., 418 Main Street .....6-inch on new supply
Brownrigg, K. Baker, Osborne Street (premises) ....6-inch on new supply
Boston Woven Hose & Rubber Co., Hampshire St. .6-inch on old supply
Boston Woven Hose & Rubber Co., Portland St. ....6-inch on old supply
Cambridge Paper Box Company, Broadway .....6-inch on old supply
Carr Fastener Company, Ames Street.....6-inch on new supply
Charlsam Real Estate Company, 100 Main Street
(premises) .....6-inch on new supply
Davis, F. H., 175 Richdale Avenue .....6-inch on new supply
Dyar Supply Company, Broadway .....4-inch on new supply
Ford Motor Company, Brookline Street (premises) ..6-inch on new supply
Gray & Davis, Inc., Amesbury Street (premises) .....8-inch on new supply
Hammett & Company, J. L., Main and Hayward Sts.
(premises) .....6-inch on new supply
Hathaway & Sons, C. F., 15 Richdale Avenue .....4-inch on new supply
Hathaway & Sons, C. F., 15 Richdale Avenue .....4-inch on old supply
Harvard University, Divinity Avenue (premises) ....6-inch on new supply
Harvard University, Oxford Street (premises) .....6-inch on new supply
Harvard University, Widener Library (premises) ...3-inch on new supply
Hingham Knit Goods Company, Banks St. (premises) 4-inch on new supply
Houghton, H. O. (Riverside Press), 20 Blackstone St. 6-inch on old supply
Hyde Company, A. R., 432 Columbia Street (premises) 4-inch on new supply
Kemp & Sons, Lysander, Broadway (premises) .....6-inch on new supply
Ladd & Barker, 31 Ames Street .....6-inch on old supply
Ladd & Barker, Amherst Street (premises) .....6-inch on new supply
Lankofsky, Baila, 329 Elm Street .....4-inch on new supply
Mass. Institute of Technology, Ames & Amherst Sts. 6-inch on new supply
Mass. Institute of Technology, 75 Massachusetts Ave. 8-inch on new supply
Mass. Institute of Technology, Vassar Street .....8-inch on new supply
Lonergan, Adeline J., Massachusetts Avenue .....3-inch on new supply
McGoldrick, H. E., 339 Franklin Street .....3-inch on new supply
Morey & Company, Commercial Avenue (premises) ..6-inch on new supply
Murray & Emery, Wadsworth Street .....6-inch on new supply
New England Tel. & Tel. Co., 51 Inman Street .....3-inch on new supply
Page & Shaw, 18-20 Ames Street (premises) .....6-inch on old supply
Penn Metal Company, 112-114 Sidney St. (premises) 6-inch on new supply
Promboin & Son, L., 449 Windsor Street (premises)..6-inch on new supply
Purity Distilling Co., Distillhouse St. (premises) .....6-inch on new supply
Putney, Henry M., 541 Windsor Street .....6-inch on new supply
Reardon & Sons' Corporation, John, Waverly St. ....8-inch on new supply
Riverside Boiler Works, 493 Main Street (premises) ..6-inch on new supply
Russell & Company, Norfolk Street .....6-inch on new supply

Squirrel Brand Nut Company, 10-12 Boardman St.	4-inch	on new	supply
Standard Oil Company, Sixth Street	4-inch	on old	supply
Standard Oil Company, Fifth & Potter Sts. (premises)	3-inch	on new	supply
Sterling Knit Goods Company, Stiles Street	6-inch	on old	supply
University Press, Nutting Place	6-inch	on old	supply
University Press, University Road	6-inch	on new	supply
Ward Baking Company, Albany Street	6-inch	on old	supply
Wheelock Lovejoy Company, Sidney Street	6-inch	on new	supply

RESERVOIRS

The continued high prices of material necessary for the repairs on our Payson Park Reservoir, do not warrant the undertaking at present of this important work.

The average elevation of Fresh Pond Reservoir has been 16.42 or .35 higher than last year.

There were no permits issued this year for fishing.

At Stony Brook Reservoir the elevations registered from the lowest, 68.50, on August 30, 1919, to the highest, 83.02, on March 18, 1920.

We have made many improvements during the year at this Reservoir, practically making over the appearance of the residence, to which we have added a piazza; painted all the buildings, which we have also equipped with electricity; set out trees and shrubs and improved the whole surroundings.

At Hobbs Brook Reservoir the elevation of the water has been registered at over high water mark (181) most of the year.

We have improved the conditions at the Reservation, the house and buildings having received many repairs and improvements. During the year we shall install electricity and equip this house to correspond with the buildings at our other basins and pumping station.

STONY BROOK OVERFLOW

	Gallons	Number of Days	Rainfall
1919			
April	665,700,000	30	2.71
May	725,700,000	31	5.81
June	30,700,000	6	1.39
July	.....	..	5.75
August	.....	..	5.49
September	34,900,000	8	7.42
October	6,200,000	4	2.24
November	475,500,000	25	5.94
December	625,800,000	31	2.06
1920			
January	1,200,000	2	3.32
February	45,600,000	9	5.30
March	2,891,600,000	27	3.90
Total amount wasted	5,502,900,000		
No. of days in which water wasted		173	
Total rainfall			51.33

Stony Brook Overflow, Etc., for the Past Thirty-Three (33) Years

	Gallons	No. of Days	Rainfall
1888	6,000,000,000	...	....
1889	8,000,000,000	...	....
1890	8,700,000,000	...	....
1891	8,247,800,000	...	45.25
1892	3,688,900,000	...	39,82
1893	4,427,400,000	...	39.50
1894	2,853,000,000	...	35.79
1895	5,281,900,000	224	50.52
1896	5,704,700,000	224	50.52
1897	3,999,700,000	256	43.35
1898	5,704,600,000	260	54.03
1899	6,969,500,000	175	43.96
1900	4,447,100,000	145	51.34
1901	6,141,300,000	157	46.77
1902	6,359,100,000	182	44.58
1903	6,437,500,000	222	45.97
1904	5,726,399,000	171	41.18
1905	3,148,900,000	140	38.40
1906	3,510,700,000	170	39.16
1907	2,415,900,000	147	42.32
*1908	3,384,300,000	184	48.23
†1109	960,800,000	50	
‡1910	2,531,500,000	137	37.83
‡1911	57,200,000	22	31.78
‡1912	1,395,200,000	69	42.63
‡1913	2,571,200,000	132	41.22
‡1914	3,022,800,000	99	42.13
‡1915	3,477,200,000	111	34.44
‡1916	2,581,900,000	136	41.90
‡1917	4,091,800,000	141	37.11
‡1918	2,386,100,000	136	38.69
‡1919	2,186,400,000	111	41.24
1920	5,502,900,000	173	51.33

* Previous to 1908—Fiscal year ended November 30.
† Overflow from December 1, 1908, to March 31, 1909.
‡ Fiscal year ended March 31.

HOBBS BROOK RESERVOIR							STONY BROOK RESERVOIR			
Lincoln Street, Basin No. 1				Winter Street, Basin No. 2			Elevation of Crest — 81			
	Lowest Elevation During Month	Highest Elevation During Month	Rainfall by Month		Lowest Elevation During Month	Highest Elevation During Month		Lowest Elevation During Month	Highest Elevation During Month	Rainfall by Month
1919				1919			1919			
April 1	181.40			April 1	181.35		April 18		81.71	
April 5		181.40		April 5		181.35	April 30	81.23		2.71
May	No record			May	No record		May 10	81.14		
May	"	No record		May	"	No record	May 24		81.75	5.81
June	"	"		June	"	"	June 1		81.23	
June	"	"		June	"	"	June 28	76.22		1.39
July	"	"		July	"	"	July 1		78.16	
July	"	"		July	"	"	July 19	69.81		5.75
Aug.	"	"		Aug.	"	"	Aug. 3		73.27	
Aug.	"	"		Aug.	"	"	Aug. 30	68.50		5.49
Sept.	"	"		Sept.	"	"	Sept. 1	68.64		
Sept.	"	"		Sept.	"	"	Sept. 26		81.18	7.42
Oct. 1	181.55			Oct. 1	181.43	"	Oct. 1		81.10	
Oct. 31		181.55	1.96	Oct. 31		181.43	Oct. 31	78.10		2.24
Nov. 1	181.55			Nov. 1	181.43		Nov. 1	78.06		
Nov. 30		181.55	4.82	Nov. 30		181.43	Nov. 28		81.71	5.94
Dec. 1	181.35			Dec. 1	181.35		Dec. 1		81.68	
Dec. 31		181.35	1.85	Dec. 31		181.35	Dec. 31	81.04		2.06
1920				1920			1920			
Jan. 1	181.35			Jan. 1	181.35		Jan. 1		81.04	
Jan. 31		181.35	2.85	Jan. 31		181.35	Jan. 31	78.27		3.32
Feb. 1	181.33			Feb. 1	181.33		Feb. 5	77.42		
Feb. 7		181.50	5.69	Feb. 7		181.50	Feb. 22		81.25	5.30
Mar. 5	181.31			Mar. 5	181.35		Mar. 4	80.86		
Mar. 18		182.08	4.20	Mar. 18		182.08	Mar. 18		83.02	3.90
Total			21.37							51.33

PIPE YARD

Our pipe yard has needed much attention this year.

We have built a new tool house, a new wagon shed and an office for the foreman and storekeeper.

The old wagon shed has been painted, as well as the new buildings.

The yard has been filled and graded.

MISCELLANEOUS

A survey for leakage has been made during the summer by the Pitometer Company of New York.

In so many locations where the gates and the main pipes are old, all the gates have been located and worked for the first time in many years.

A number of these gates, found broken, have been repaired and the gates all over the City have been brought up to a working standard.

It is my intention to have made from the information accumulated during the survey, an authentic reference outfit, whereby our employees can in emergencies always arising, readily find the controlling gates of the districts affected by leakage, from accident, etc.

The "Pitometer" survey also revealed leakage to the extent that the increased revenue received will meet the expense of the survey in a few years.

We have lost three of our valued old employees during the year.

John McMakim, who had been in our employ since 1892, passed away in May, 1919.

Although in poor health for many months he was on duty until within a few days of his death.

The department hereby places on record its appreciation of the long and faithful services of its old foreman.

Irving H. Henderson, who has had charge of our meter department and worked for the department since 1893, resigned in September, 1919, to accept a position in Springfield, Mass.

The department also places on record its appreciation of his long and efficient service and best wishes for his continued advancement.

J. Eliot Bryant, our Keeper at Hobbs Brook Reservoir, passed away in April, 1919.

He took charge of this reservation in 1898, shortly after our dams were constructed for these basins.

Previous to his death he had been ill for some time but kept up his interest and faithfulness to the end.

The department records his long and interested service with appreciation.

Respectfully submitted,

TIMOTHY W. GOOD,

General Superintendent,

Cambridge Water Works.

SUMMARY OF STATISTICS

In form recommended by the New England Water Works Association.

CAMBRIDGE WATER WORKS

Cambridge, Middlesex County, Massachusetts.

GENERAL STATISTICS

Population by census 1910, 104,839.

Estimated population March 31, 1920, 114,900.

"Cambridge Water Works Corporation" was chartered in 1852 and organized in 1853.

The works were constructed in 1855, Mr. John Blake, consulting engineer, and came into possession of the city by purchase in 1865, when they were called "Cambridge Water Works."

The original source of supply was Fresh Pond in Cambridge and Belmont, which was enlarged by connection via conduit with Wellington Brook and Spy Pond, Arlington. The waters of these additional sources were adjudged unfit for domestic use in 1880 and since that time have not been utilized for a supply in Cambridge.

In 1887, Fresh Pond was augmented by a storage reservoir which had been constructed on Stony Brook, located in Weston and Waltham.

The waters from this brook are brought to Fresh Pond by a conduit, originally a thirty-inch cast iron pipe, which was laid through Waltham and Watertown to Fresh Pond Reservoir.

This extension of the works was made under the direction of Mr. N. Henry Crafts, as consulting engineer, and our city engineer, Mr. W. S. Barbour.

The population of the city was about 60,000 in 1887.

In 1897, an additional provision was made for storing water by the construction of two large reservoirs artificially formed by constructing two dams across Hobbs Brook, which is a tributary of Stony Brook, and flows through Lexington and Lincoln.

Payson Park Distributing Reservoir also was completed in 1897.

Consulting engineers, Mr. A. Fteley and Messrs. Rice and Evans, and our City Engineer, Mr. L. M. Hastings, directed the construction of these reservoirs.

The population was about 87,500 in 1897.

In 1905 and 1906, two sections of the Stony Brook pipe line were rebuilt; the new conduit was made of concrete, sixty-three inches in diameter. Another part was rebuilt in 1908, when a new thirty-inch main of cast iron was laid to replace 1,500 feet of old thirty-inch line.

The consulting engineer for the concrete conduit was Mr. Freeman C. Coffin, assisted by our City Engineer, Mr. L. M. Hastings.

The new thirty-inch main was laid under the supervision of the Water Works Superintendent, Mr. E. C. Brooks.

The conduit is constructed as follows:

From Fresh Pond to River Street, Waltham, 27,405 feet of 63-inch concrete.

From River Street to Stony Brook Dam, 1,500 feet of 30-inch (new); 6,023 feet of 30-inch (old); 4,826 feet of 36-inch (old).

Mode of supply: gravity from Hobbs Brook and Stony Brook storage reservoirs to Fresh Pond receiving reservoir; pumping from Fresh Pond receiving reservoir to Payson Park distributing reservoir, through the 40-inch steel pumping main; thence, by gravity, to consumers through the 40-inch steel distributing main. The Leavitt engine, of 20,000,000 gallons capacity, is connected with this steel main.

In case of necessity the water can be pumped direct from the pumping station through the 30-inch and 24-inch cast iron pumping mains into the 40-inch steel distributing main. The Worthington engines are used in connection with these mains and are held in reserve for any possible emergency.

STATISTICS RELATING TO DISTRIBUTING SYSTEM

Our 40-inch pumping main to and distributing main from Payson Park Distributing Reservoir is of steel.

The main pipes are of cast iron.

Sizes, 4-inch to 40-inch.

Extensions during year, 3336 feet.

Renewals during year, 1387 feet.

Total now in use:

4-inch	74,140 feet
6-inch	356,918 feet
8-inch	87,359 feet
10-inch	32,634 feet
12-inch	81,662 feet
16-inch	11,605 feet
20-inch	25,275 feet
24-inch	15,367 feet
30-inch	1,357 feet
40-inch	550 feet
	686,867 feet
	or 130.08 miles

Forty-inch steel main, 23,316 feet or 4.41 miles.
Number of leaks per mile, on mains and supplies, for the year, 1.45.
Length of 2-inch and 3-inch mains, 1.87 miles.
Number of hydrants added during year (public) 7.
Total number of hydrants now in use, 1221.
Number of stop gates added during the year, 29.
Range of pressure on mains, 55 to 60 pounds.

SERVICES

Kind of pipe: galvanized iron, cast iron, tin lined, lead lined.
Extended during the year, 3229 feet.
Sizes, ¾-inch to 8-inch.
Number of services added during the year, 102.

¾-inch	49
1-inch	18
1¼-inch	3
1½-inch	4
2-inch	6
4-inch	11
6-inch	10
8-inch	1
Total	102

Number laid to date, 17,188.
Number in use at date, 14,802.

Average length of services for past year, 31.6 feet.
Average cost per year (includes large supplies), $68.83.
Number of meters added during the year, 230.
Percentage of services (in use) metered, 44.

PUMPING STATISTICS

1. Builders of pumping machinery: One Leavitt engine of 20,000,000 gallons capacity per 24 hours, built by Goshen High Duty Pumping Engine Company. Two Worthington Compound Duplex engines, of 5,000,000 gallons capacity each per 24 hours. Total capacity, 30,000,000 gallons per 24 hours.
2. Description of fuel: Kind, bituminous. Brand and price of coal: Chiefly "Rockhill" at $6.80 to $7.10 per ton.
3. Coal consumed during year, 5,802,900 pounds.
   Daily average of coal consumed, 15,855 pounds.
   Coal per million gallons pumped, 1,454 pounds.
   Total pumpage for the year without allowance for slip, 3,990,502,200 gallons. Daily average, 10,903,011 gallons.
4. Average static head against which the pump works, 157.08.
5. Average dynamic head against which the pump works, 189.22. gallons.
7. Duty, 108,526,333.
8. Cost of pumping figured on pumping station expenses, viz., $58,823.26.
9. Per million gallons pumped, $14.74.
10. Per million gallons raised one foot (dynamic) .07 7-10.

FINANCIAL STATEMENT

Fore the year ending, March 31, 1920

		Operating Expenses
Maintenance Account General:		
A—Personal Service:		
1. Permanent employees	$75,607 62	
2. Temporary employees	45,920 51	
3. Unassigned employees	2,700 00	
	$124,228 13	$121,317 90

B—Service other than personal		$30,065 09	$30,065 09
C—Equipment		1,486 75	1,486 75
D—Supplies		10,675 69	10,675 69
E—Materials		32,167 18	28,056 34
F—Special Items	$5,033 48		
4. Serial Loan	20,500 00		
5. Interest	43,993 75		
14. Abatements and Refunds	1,168 88		
		70,696 11	5,033 48
G—Incidental Expenditures		2,704 75	2,704 75
		$272,023 70	$199,340 00

With new supplies, serial loan, interest and abatements deducted—($72,683.70).

Pumping:

A—Personal Service:		
1. Permanent employees	$17,123 35	
2. Temporary employees	2,741 44	
	$19,864 79	
B—Service other than personal	9,686 48	
C—Equipment	109 83	
D—General Plant	29,162 16	
	$58,823 26	$58,823 26

Reservoirs:

A—Personal Service:		
1. Permanent employees	11,256 86	
2. Temporary employees	9,379 99	
3. Unassigned employees	458 50	
	$21,095 35	
B—Service other than personal	4,490 87	
C—Equipment	9 87	
D—Supplies	981 34	
	$26,577 43	$26,577 43
Total expenditure for the year	$357,424 39	$284,740 69

STATISTICS OF CONSUMPTION OF WATER

For the year extending from April 1, 1919, to March 31, 1920.

Total population, census of 1915, 108,822.

Estimated population supplied on lines of pipes, 114,900.

Total pumpage for the year, 3,990,502,200 gallons.

Average daily pumpage, 10,903,011 gallons.

Gallons per day to each inhabitant (pumpage) 94.89 gallons.

Gallons per day to each tap in use (pumpage) 736 gallons.

Total cost of supplying water per million gallons pumped figured on "Total Maintenance" ($357,424.39), $89.56.

Cost of supplying water per million gallons pumped, figured on "Operating Expenses" ($284,740.69), $71.35.

Respectfully submitted,

TIMOTHY W. GOOD,

General Superintendent.

REPORT OF THE CAMBRIDGE WATER BOARD

April 1, 1920.

To the Honorable, the City Council of the City of Cambridge,

Gentlemen:—The fifty-fifth annual report of the Cambridge Water Board for the year ending March 31, 1920, is herewith submitted for your consideration.

The reports of the General Superintendent of Water Works, Water Registrar and Commissioners of the Sinking Fund of the City give in detail the operations and financial condition of the water works:

FINANCIAL STATEMENT IN BRIEF

Total cost of water works to March 31, 1920	$6,745,894 52

WATER WORKS BOND ACCOUNT

Whole amount of bonds outstanding April 1, 1920	1,056,500 00
Less value of water debt sinking fund	642,549 52
Net water debt on March 31, 1920	$413,950 48

During the past year the following water bonds matured and were paid, viz.:

May 1, 1919	3½%	$12,500	(serial).
July 1, 1919	3½%	3,500	(serial).
Sept. 1, 1919	3½%	1,000	(serial).
Nov. 1, 1919	4%	23,000	
Nov. 1, 1919	3½%	500	(serial).
Dec. 1 ,1919	3½%	1,000	(serial).
Feb. 1, 1920	3½%	1,500	(serial).
March 1, 1920	3½%	500	(serial).
Total		$43,500	

CONSUMPTION OF WATER

The total consumption of water for the year ending April 1, 1920, was	3,990,502,200	gallons
The total consumption of water for the year ending April 1, 1919, was	3,900,317,100	gallons
Increase over last year	90,185,100	gallons
Daily average consumption in 1919-20	10,903,011	gallons
Daily consumption in 1918-19	10,685,800	gallons
Increase over last year	217,211	gallons

WATER SUPPLY

As has been our experience for the last three years, our several reservoirs are full, and surplus water is going to waste over the spillways.

FILTRATION

The high cost of labor and material, and the difficulty of obtaining materials only at prohibitive prices, have contributed to postpone the construction of the filter plant. In the meantime we are keeping in touch with new and advanced methods of construction and operation, which will be embodied in revised plans and specifications. We hope that conditions will warrant us in proceeding with the construction of the plant during the coming year.

PREPARATIONS FOR FILTRATION

For the past three years we have been having our large mains systematically cleaned, that they may be in good condition when the filtration system is introduced. In the past two years we have cleaned ten miles of mains, more especially those that act as feeders for the smaller mains.

PITOMETER SURVEY

We have just completed a Pitometer survey of the city. The city was divided into 21 districts; each district was tested separately as to the amount of water supplied to it, and whether the amount was normal or excessive. In connection with these tests the size of the mains feeding the district, and whether they were adequate, were also considered. The Pitometer Company has not found in any of the 21 districts that the distribution system is lacking in size or effectiveness.

The survey has also demonstrated that our mains are in good condition, and that the house to house inspection by the Pitometer Company, together with that carried on under the direction of the Water Board, has proven that leaks and waste on the premises are at a minimum.

METERED WATER

As was anticipated, the various industries have used a reduced amount of water as compared with the preceding year. The receipts

for metered water for the year fell off about $23,000, or about to the normal amount.

METERS

One hundred ninety-one meters were added during the year, making the total number now in use six thousand six hundred (6,600), forty-four percent (44%) of the live supplies now being metered.

Of the 6,600 meters now in place we receive revenue from 6,478; of the remainder, 52 meters are of the Detector type set on fire supplies, and 70 are on public buildings; from these two latter made uses we receive no revenue.

IN GENERAL

The surplus receipts of 1917-18 amounted to	$33,543 71
The surplus receipts of 1918-19 amounted to	105,994 89
The surplus receipts of 1919-20 amounted to	69,810 28
Total	$209,348 88

This amount ($209,348.88) is in the hands of the City Treasurer subject to such expenditures for water works as the City Council may authorize.

Respectfully submitted,

JAMES J. SCULLY,
JOSEPH E. DOHERTY,
JOHN F. O'BRIEN,
BERNARD E. McDERMOTT,
JOHN P. CONROY,
Cambridge Water Board.

REPORT OF THE WATER REGISTRAR

WATER REGISTRAR'S OFFICE,

April 1, 1920.

Hon. Timothy W. Good, General Superintendent of Cambridge Water Works:

In compliance with the requirements of the city ordinance I present the fifty-fifth annual report of the operations of this department, showing the receipts, expenditures, abatements, etc., for the year ending March 31, 1920:

Amount of bills unpaid March 31, 1919:

Water rates	$40,495 57	
Supplies and repairs	4,191 18	
Off and on	152 00	
Seals	31 75	
Maintenance and building account	1,709 18	
Construction account	9 53	
		$46,589 21

Amount of bills placed in the hands of the City Treasurer for collection from April 1, 1919, to March 31, 1920:

Water rates	$398,896 79	
Supplies and repairs	10,443 77	
Off and on, rents and seals	781 65	
Maintenance account	6,563 15	
		$416,685 36
		$463,274 57

There has been collected:

Water rates	$404,419 72	
Miscellaneous	18,056 45	

There has been abated:

Water rates, off and on, seals, supplies and repairs, and construction account	3,680 82	

There remains uncollected:

Water rates	$31,414 09	
Supplies and repairs	3,441 49	
Off and on	141 00	
Seals	29 50	
Maintenance and building account	2,081 97	
Construction account	9 53	
		$463,274 57

EXPENDITURES

Maintenance account, from April 1, 1919, to March 31, 1920	$290,592 88	
Serial bonds paid	20,500 00	
		$311,092 88

ABATEMENTS

Water rates, supply and repair and construction bills from April 1, 1919, to March 31, 1920, to the amount of	3,680 82

REFUNDS

Water rates from April 1, 1919, to March 31, 1920, to the amount of	1,168 88	
Which amount deducted from receipts	404,419 72	
Leaves net receipts for water	$403,250 84	
Add off and on, rents, fines, seals, and maintenance and supply accounts	17,788 57	
Makes net receipts of rates, fines, etc.		$421,039 41

Statements of yearly revenue received from water rates since the purchase of the works by the City:

From April 28, 1865, to December 1, 1865	$32,367 19
From December 1, 1865, to December 1, 1866	40,073 27
From December 1, 1866, to December 1, 1867	53,733 62
From December 1, 1867, to December 1, 1868	63,747 42
From December 1, 1868, to December 1, 1869	76,149 30
From December 1, 1869, to December 1, 1870	92,605 95
From December 1, 1870, to December 1, 1871	111,782 65
From December 1, 1871, to December 1, 1872	127,201 30
From December 1, 1872, to December 1, 1873	146,117 32
From December 1, 1873, to December 1, 1874	153,634 27
From December 1, 1874, to December 1, 1875	138,880 37
From December 1, 1875, to December 1, 1876	179,166 76
From December 1, 1876, to December 1, 1877	154,843 59
From December 1, 1877, to December 1, 1878	157,443 91
From December 1, 1878, to December 1, 1879	164,681 90
From December 1, 1879, to December 1, 1880	173,325 49
From December 1, 1880, to December 1, 1881	170,062 73
From December 1, 1881, to December 1, 1882	177,430 80
From December 1, 1882, to December 1, 1883	179,361 89
From December 1, 1883, to December 1, 1884	161,526 27
From December 1, 1884, to December 1, 1885	185,544 36
From December 1, 1885, to December 1, 1886	199,404 43
From December 1, 1886, to December 1, 1887	204,748 64
From December 1, 1887, to December 1, 1888	211,156 27
From December 1, 1888, to December 1, 1889	221,124 70
From December 1, 1889, to December 1, 1890	231,116 32
From December 1, 1890, to December 1, 1891	227,054 53
From December 1, 1891, to December 1, 1892	237,527 08
From December 1, 1892, to December 1, 1893	242,219 78
From December 1, 1893, to December 1, 1894	250,032 71
From December 1, 1894, to December 1, 1895	268,813 62
From December 1, 1895, to December 1, 1896	281,030 00
From December 1, 1896, to December 1, 1897	291,457 62

From December 1, 1897, to December 1, 1898	297,129 78
From December 1, 1898, to December 1, 1899	302,569 06
From December 1, 1899, to December 1, 1900	319,479 37
From December 1, 1900, to December 1, 1901	320,468 01
From December 1, 1901, to December 1, 1902	323,000 53
From December 1, 1902, to December 1, 1903	333,777 34
From December 1, 1903, to December 1, 1904	339,109 27
From December 1, 1904, to December 1, 1905	343,916 00
From December 1, 1905, to December 1, 1906	355,768 47
From December 1, 1906, to December 1, 1907	373,151 35
From December 1, 1907, to March 31, 1909 (16 months)	410,533 41
From April 1, 1909, to March 31, 1910	351,264 86
From April 1, 1910, to March 31, 1911	375,722 42
*From April 1, 1911, to March 31, 1912	353,891 02
From April 1, 1912, to March 31, 1913	385,475 71
From April 1, 1913, to March 31, 1914	383,342 41
From April 1, 1914, to March 31, 1915	396,827 26
From April 1, 1915, to March 31, 1916	394,908 36
From April 1, 1916, to March 31, 1917	401,607 91
From April 1, 1917, to March 31, 1918	**358,335 70**
From April 1, 1918, to March 31, 1919	423,906 19
From April 1, 1919, to March 31, 1920	403,250 84

*Reduction in water rate schedule.

COMPARATIVE STATEMENT

	1918–1919		1919–1920	
MAINTENANCE ACCOUNT				
Received				
From rates, fines, etc.	$439,273.79		$422,476.17	
Reappropriations	1,695		6,010	
		$440,968.79		$428,486.17
Expended				
General, pumping and reservoirs	$251,786.08		$291,763.26	
Refunds	1,219.18		1,168.88	
Interest on water debt	46,068.75		43,993.75	
Serial bonds paid	20,500		20,500	
Reappropriations	6,010		1,250	
Police protection	9,389.89			
Balance due water works	105,994.89		69,810.28	
		$440,968.79		$428,486.17

The above surplus receipts for the year 1919-20 of $69,810.28, together with those of the two preceding years, amounting to $209,-348.88, are retained in the city treasury to the credit of the Water Department, as required by law.

The monthly house-to-house inspection for leaks and waste has shown satisfactory results. This inspection has resulted in a very considerable saving in waste of water.

Respectfully submitted,

WALTER H. HARDING,

Registrar.

REPORT OF THE TRUSTEES OF THE DOWSE INSTITUTE FOR THE YEAR OF 1919-1920.

To the Honorable, the City Council:

Gentlemen:—During the year 1919-20 the Trustees of the Dowse Institute co-operated with the School Committee in maintaining neighborhood centers in the schoolhouses, appropriating and spending for that purpose the amount of $815.85; and they also contributed to the work of the Riverside Neighborhood House the amount of $66.

Respectfully,

JOSEPH H. BEALE,
Clerk of the Trustees.

FIFTY-THIRD ANNUAL REPORT OF THE CITY ENGINEER 1919-1920

APRIL 1, 1920

To the Honorable, the City Council:

The City Engineer hereby submits his annual report, being the fifty-third of the department, showing the operation and expenditures of the Engineering and Sewer Departments for the year ending April 1, 1920.

A brief summary of the work of the Engineering and Sewer Departments for the year is as follows:

FOR HIGHWAY DEPARTMENT

Number of surveys made	6
Number of street lines given	31
Number of grades given	47
Number of streets on which paving, curb, etc., was measured	72
Number of assessments prepared	68
Number of plans and profiles prepared	15
Number of cars of Street Department	1

FOR SEWER DEPARTMENT

Number of surveys made	11
Number of lines given	105
Number of grades given	118
Number of sewers measured	11
Number of assessments prepared	
Number of sewers assessed	
Number of plans or profiles prepared	13

FOR WATER DEPARTMENT

Number of lines given	3
Number of surveys made	4
Number of plans and profiles made	3
Number of grades given	5

FOR LAW DEPARTMENT

Number of surveys made	60
Number of photographic negatives	68

MISCELLANEOUS WORK

Number of circuits of bench levels	2
Number of houses measured	50
Number of plans and profiles prepared, tracings, etc.	36
Number of surveys made	8
Number of lines given	46
Number of grades given	33

FOR PARK DEPARTMENT

Number of surveys given	2
Number of lines given	12
Number of grades given	20

There are now on file in this office 13,503 plans.

FINANCIAL

ENGINEERING DEPARTMENT

Salaries

Appropriation	$10,991 50
Expended	10,821 63
Balance	169 87

OTHER EXPENSES

Appropriation	$805 00
Expended	670 24
Balance	134 76

In addition to and including the above amount charged to salaries of assistants, there has been expended and charged to departments as follows:

To Assessors' plans	200 00
To Sewer Department	1,574 67
To salary of City Engineer	3,125 00
Salaries of Assistants	7,696 63
Total	12,596 30

CLASSIFICATION OF SALARIES OF ASSISTANTS

Accounts	998 34
Assessors' Plans—Surveys, measurements and work on block plans for Assessors' Department	633 63
Accidents—Surveys, plans and court attendance for Law Department	179 91
Bridges—Surveys, plans, examinations and estifates	239 21
Cemetery—Surveys and plans, setting out lots at Cambridge Cemetery	87 91
General Surveys and Levels—Surveys and work on section and city plans and bench levelling	225 15
Highways—Surveys, levels, plans, estimates, measurements and assessments for Highway Department; also lines and grades for private parties	2,267 39
Miscellaneous—Unclassified work for committees and departments, vacations and sickness	1,631 20
Parks—Surveys, lines, grades, plans and estimates for Park Department	137 66
Sewers—Lines, grades, plans, estimates, accounts, measurements and assessments for Sewer Department	2,368 47

Sidewalks—Estimates, measurements, titles and assessments for Highway Department	82 87
Water Works—Surveys, lines, grades, plans and estimates for Water Works Department	359 70
Location Plans	826 86
Total	**$10,038 30**

PAVEMENT STATISTICS

Statistics of pavements laid in the City to date are as follows:

Statistics of the Pavement Laid in This City to April 1, 1920, Are As Follows:

Kind	Length in Miles			Area in Square Yards		
	Laid in 1920	Removed in 1919	To Date, 3/31/19	Laid in 1919	Removed in 1919	To Date, 3/31/20
Granite Block	None	0.166	12.166	2,666	3,208	308,526
Vitrified Brick	None	0.590	2.929	None	14,373	57,541
Wood Block	0.080	None	3.685	5,076	None	86,617
Bitulithic	2.666	None	12.587	55,375	None	282,597
Tar Macadam	7.186	0.968	23.248	113,650	23,283	381,820
Macadam	None	7.850	51.589	None	126,748	606,942
Totals			106.204	176,767		1,724,043

In addition to the above:

Harvard Bridge — Wood Block	0.185 miles	5,512 sq. yds.
Cambridge Bridge — Granite Block	0.161 "	4,044 " "
Charles River Dam — Granite Block	0.106 "	5,469 " "
Anderson Bridge — Wood Block	0.041 "	978 " "

Streets Laid Out and Accepted April 1, 1919, to April 1, 1920

LOCATION OF STREET						PLAN	
Street	From	To	Length in Feet	Width in Feet	Date of Acceptance	Made by	Date
Norumbega	Belmont	Northerly	208	40	Dec. 8, 1919	Bay State Surveying Co.	Apr. 26, 1919
Tudor	Brookline	Sidney	457	40	Dec. 8, 1919	H. T. Burrage	Apr. 21, 1919

Length of Accepted Streets, March 31, 1919	108.464 miles
Accepted in 1919	.126 "
Length of Accepted Streets, March 31, 1920	108.590 "
Length of Unaccepted Streets, March 31,1920	16.640 "
Total mileage open for travel	125.234 "

BRIDGES

FIRST STREET BRIDGE.—For several years now this bridge has been reported as in a dilapidated and dangerous condition, entirely unfitted for the heavy traffic which is being put upon it. In 1919 a report was made to his Honor, the Mayor, referring to the condition of the bridge and recommending the construction of a new bridge of steel and concrete with a wider draw-opening and giving an estimate of the probable cost of the same as about $100,000. The reconstruction of this bridge is again urgently recommended.

THIRD STREET BRIDGE AND SIXTH STREET BRIDGE.—These two wooden bridges over Broad Canal are old and not in good condition and besides, the amount and weight of traffic carried by them has greatly increased. Both bridges should be rebuilt at an early day. For the present, minor repairs will be needed to make them safe.

COMMERCIAL AVENUE BRIDGE.—This bridge is in fairly good condition. The top course of 2-inch planking should be renewed and various repairs and adjustments made to the rest of the bridge.

The rest of the bridges are in fair condition and will need the usual repairs, painting, etc.

GENERAL SEWER CONSTRUCTION

The total length of sewer conduit constructed during the year was 1.375 miles, making the total mileage in the city 162,974 miles. The length of streets newly sewered during the year has been 9.157 miles, making the total mileage of streets sewered with one or more conduits, 122,400 miles.

The total cost of sewer construction to date has been $2,643,-629.21.

Sewers have been built upon streets as shown by the annexed schedule.

CATCH BASINS

Catch basins with wooden covers	250
Catch basins with sidewalk flagging	1,068
Catch basins with cast iron "D" frames	915
Catch basins with miscellaneous covers	65
Total number in city	2,298

Nineteen new catch basins have been built during the year at a total cost of $5,322.89.

Thirty-seven catch basins have been repaired during the year at a cost of $1,211.61; 2,691.2 cubic yards of material have been removed from 1,433 catch basins during the year at a cost of $7,136.21.

Twelve persons have been licensed as drain layers during the year.

Permits have been granted for sewer repairs or constructions as follows:

For repairs	39
For connection to combined sewers	40
For connection to sanitary sewers	33
For connection to storm sewers	22

A total of 95 permits for connections and 39 for repairs.

CLASSIFIED SCHEDULE OF SEWERS AS BUILT TO APRIL 1, 1920

	Miles
Vitrified and cement pipe	105.193
Brick	48.751
Miscellaneous materials	3.313
Wood	2.821
Cement concrete	2.582
Iron pipe	0.314
Total length of sewer conduit constructed to date	162.974

MAINTENANCE

Appropriation	$23,042 98
Expended	24,776 96
Deficit	1,733 98

Expended

Catch basin repairs	1,134 29
Catch basin cleaning	7,136 21
Cleaning and repairing gates	1,922 75
Cleaning sumps	220 20
Cleaning and flushing sewers	371 84
Manhole repairs	379 11
General expense	7,968 74
Office	613 31
Sewer Repairs	1,211 36
Stable expense	1,436 74
Pensions	2,382 33
Total	24,776 96

CONSTRUCTION—GENERAL

Appropriation	68,350 89
Expended	64,196 17
Balance	4,154 72

Expended

New catch basins		5,322 89
General expense		1,211 61
Cambridge St. Sewer		4,837 35
Lake View Ave. Sewer Worthington St. Sewer Lexington Ave. Sewer		18,118 38
Whittewore Ave. Sewer		5,314 56
Blair Place Sewer		677 90
Rogers St. Sewer		1,588 66
Buckingham St. Sewer		9,493 93
Fourth St. Sewer		766 05
Museum St. Sewer		4,920 01
Fresh Pond Ave. Sewer		11,944 89
Total Expenditure for 1919-1920	$64,196 17	

Revenue

Sewer assessments	664 22
Sundry receipts (maintenance)	244 82

METROPOLITAN SEWER TAX

Appropriation		$133,430 27
Sinking Fund requirements	$28,505 74	
Interest account	52,982 55	
Maintenance and operation	46,484 38	
Maturing serial bonds	5,457 60	

MOSQUITO SUPPRESSION

The satisfactory results obtained in 1918 in the efforts to suppress the mosquito pest led to the continuation of the work during 1919. The sum of $3,000 was appropriated and the work was carried on during the season from about May 1 to Oct. 15, along the same lines as last year.

The drainage ditches dug last year were opened up and when necessary cleaned out. The drainage ditches on the lands adjoining the esplanade in the vicinity of Fowler Street were extended about 670 feet and about 120 feet of wooden culverts were built. All the ponds, pools and ditches with stagnant water were systematically oiled.

During the early part of the season all the catch basins, about 2,300 in number, were oiled every two weeks. In the latter part of the season, owing to depleted appropriation, the number of men employed was reduced and the time between oilings of the catch basins was lengthened.

A few invasions of mosquitos were experienced during the season apparently coming from sections outside the city limits. Investigation showed that considerable areas on the Metropolitan Parkway

bordering the Charles River in Watertown, adjoining the Cambridge line, and also another area in Belmont adjacent to the Wellington Brook near the city line, were prolific breeding grounds for these pests and that probably the mosquitoes came from there.

It is hoped that these areas will be oiled by the proper authorities during the coming season so that Cambridge will not suffer by reason of mosquitos bred in other towns.

The annual appropriation for 1919 was	$3,000 00
Additional appropriation	1,000 00
Total	4,000 00

EXPENDED

For inspector labor	$2,995 39
Fore hire of auto, team and repairs	776 09
For oil	326 92
Miscellaneous	91 03
Total	$4,189 43

WATER WORKS

Water wasted over Stony Brook Dam as follows:

	Gallons
January, 1919	232,600,000
February, 1919	82,300,000
March, 1919	1,136,350,000
April, 1919	660,550,000
May, 1919	714,950,000
June, 1919	29,100,000
July, 1919	
August, 1919	
September, 1919	37,200,000
October, 1919	6,050,000
November, 1919	482,000,000
December, 1919	614,650,000
The total passing the dam during the year 1919 was	3,995,750,000

Table Showing Comparison by Months of the Precipitation at Stony Brook Basin, Hobbs Brook Basin, Baker's Bridge, and Cambridge City Hall; Also the Number of Days in Which Rain Fell at City Hall in 1919.

Point of Observation		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Stony Brook Basin..	Monthly Precipitation	3.95	3.12	4.60	2.72	5.81	1.39	5.75	5.49	7.42	2.22	5.94	2.06	50.47
*Hobbs Brook Basin.	Monthly Precipitation	4.05	3.30	4.45	2.23	5.93	1.70	5.10	4.88	6.28	1.96	4.82	1.85	46.15
Baker's Bridge.....	Monthly Precipitation	2.75	2.81	3.75	1.85	5.62	1.22	5.46	4.33	5.15	1.94	6.07	1.24	42.19
City Hall.....	Monthly Precipitation	3.95	3.27	4.41	2.73	4.45	1.06	4.34	4.76	5.91	2.20	5.68	1.61	44.37
	No. of days in which rain fell.....	8	8	12	8	10	3	10	10	13	10	11	10	113

* Hobbs Brook records not complete. Amounts given are average of Stony Brook and Baker's Bridge from April to September inclusive.

SUMMARY OF SEWERAGE STATISTICS

(In form recommended by Sanitary Section of Boston Society Civil Engineers)

For the Year Ending April 1, 1920

CAMBRIDGE, MASSACHUSETTS

General

Population of 1917 (estimated by U. S. Government)	114,203
	Sq. miles
Total area of city	6.535
Area served by sewerage system	about 6
Collection system for sewage only	
Collection system for sewage and surface water	
Collection system for surface water only	

Method of disposal, discharge into ocean by the Metropolitan (State) sewer.

COLLECTION

Mains (everything but house and catch basin connections).

	For sewage only	For sewage and surface water	For surface water only
Lineal feet extended during the year	6,103.8	89.2	1,324.8

Method of flushing ..... By use of hydrant hose

Method of cleaning ..... By scraping and flushing

HOUSE CONNECTIONS

By whom made	By property owners
Sizes	6-inch diameter
Number made during the year	95

CATCH BASINS

Number of new ones built	19
Number cleaned	1,433
Average amount of material removed per catch basin (cu. ft.)	30
Cost of removing material per cubic yard	$2.65
Cost of removing material per catch basin per year	4.99

DISCHARGE OF SEWAGE

Estimated population using sewer system	114,200
Number of buildings connected (estimated at	15,100

FINANCIAL

CONSTRUCTION

RECEIPTS		EXPENDITURES	
Bonds issued	$52,500 00	Collection works	64,196 17
Assessments not available for expenditure	1,402 94	Balance	4,154 72
Appropriation	68,350 89		

MAINTENANCE AND OPERATION

RECEIPTS		EXPENDITURES	
Appropriation	$23,042 98	Administration	$10,018 79
Sundries		Repairs	2,724 76
		Cleaning sewers	2,14 033
		Cleaning catch basins	7,136 21
		Flushing sewers	371 84
		Pensions	2,382 33
Total	23,042 98	Total	24,776 96
Deficit			$1,733 98

GENERAL

Total cost of collecting mains and total cost of works to date $2,643,629 21
Average rate of interest on bonds 3½ and 5 per cent.
Proportion of cost of system assessed on abutters estimated at ¾.
Yearly assessment for maintenance, nothing.
Method of assessing abutters and rate of assessment, based on frontage and area of lot within 100 feet of street.

The Engineering Department is organized as follows:

City Engineer
LEWIS M. HASTINGS

Principal Assistant
GEORGE DAVIS

Assistants
HENRY T. BURRAGE, Office Assistant and Draughtsman.
G. FRANK HOOKER, in charge of Street Work.
EDGAR W. DAVIS, in charge of Sewer Work.

Transitman
RAY L. COOLIDGE

Rodman
EDWARD SMITH

Clerk and Stenographer
OLIVE T. DANEHY and GENEVIEVE G. HANNON

Superintendent of Sewers
THOMAS P. O'NEILL

Respectfully submitted,

L. M. HASTINGS,
City Engineer.

THE STREETS OF CAMBRIDGE

SOME ACCOUNT OF THEIR ORIGIN AND HISTORY

INTRODUCTION

One of the first and most fundamental needs of a civilized community is adequate and convenient means of communication by public highways or roads.

For this reason, the history of its growth and development is intimately connected with the story of its streets and ways. Indeed, the importance and value of roads has long been recognized by thinking men, not simply as a ready means of getting somewhere, but, far beyond that, as a potent factor in raising the standard of social life and culture in any community.

Lord Bacon, more than three centuries ago, wrote that there are three things necessary for a nation's prosperity—a fertile soil, busy work shops, and means for the easy transportation of persons and commodities from one place to another.

Thomas B. Macaulay, the noted English writer and historian, writing about 1850 of the invention of the alphabet, said, "Of all the inventions—the alphabet and the printing press alone excepted—those *inventions which abridge distance* have done most for the civilization of our species. Every improvement of the means of locomotion benefits mankind morally and intellectually as well as materially, and not only facilitates the interchange of the various productions of nature and art, but tends to remove national and provincial antipathies, and to bind together all the branches of the great human family."

Still later, the Rev. Horace Bushnell, a well known divine and theologian of this country, wrote these rather remarkable words: "The road is that physical sign or symbol by which you will best understand any age or people. If they have no roads, they are savages, for the road is a type of civilized society. If you wish to know whether society is stagnant, learning scolastic, religion a dead formality, you may learn something by going into universities and libraries, but quite as much by looking at the roads; for if there is any motion to society, the road, which is the symbol of motion, will indicate the fact. When

there is activity, or enlargement, or a liberalizing spirit of any kind, then there is intercourse and travel, and these require *roads!*"

Samuel Smiles, author of many engineering works, writing in 1861, says, "Roads have in all times been among the most influential agencies of society. Roads are literally the pathways, not only of industry, but of social and national intercourse.

"Wherever a line of communication between men is formed, it renders commerce practicable; and where commerce penetrates, it invariably creates a civilization and leaves a history."

If the words of these learned men are true, then the extent and condition of the roads of a country may be regarded as an index of its progress, a kind of exponent of the power to which its civilization has been raised.

Much might be written to illustrate how the life and culture of a community are very generally reflected in the character and extent of its roads.

Thus the rough mountain paths, the desert camel caravan tracks, and the primitive unfinished ways which the ancient eastern peoples used for centuries, clearly typify the simple pastoral life and uncultured civilization which existed in those early times.

Later the mighty military spirit and civilization of the great Roman Empire, at its zenith during the first centuries of the Christian Era, was well expressed by its system of military roads and viaducts reaching all parts of the Empire, then embracing nearly the entire civilized world, many ruins of which remain to this day objects of wonder and interest to all travellers.

And again, the more refined and cultured civilization of the French Republic is well typified by its system of carefully planned and highly finished national roads and highways.

But perhaps no better illustration can be given than that of our own country. When the Pilgrims landed on these shores nearly three hundred years ago, they found only a crude and savage civilization and the most primitive means of communication—simply the natural streams and such trails as the Indians' own feet had made. These means, however, had served the needs of the simple people for an unknown number of centuries. No progress had been made because the needs of the civilization did not require it. With the coming of the white man, however, a new civilization was introduced, which quickly led to the construction of highways and the establishment of ferries and fords at stream crossings.

Slowly, and by the expenditure of vast amounts of labor and money, these highways were extended and improved, the ferries and fords were replaced by bridges and viaducts, and the tremendous natural obstacles of immense distances, wide streams, and heavy grades found in many parts of the country were overcome, and works in highway construction of great magnitude commensurate with the wealth and civilization of the country have been carried out. By these means, the freest intercourse between all parts of the country in commerce, trade, and social life is now possible and easy, and the standards of living and the culture of the people have been correspondingly raised.

It is proposed, in the pages which follow, to show something of the way in which the great natural disadvantages of situation and topography, which existed in the original site chosen for the future town of Cambridge, were overcome, and a system of highways and bridges constructed adequate and convenient for local use, and which now forms an important part of the highway system of the great metropolitan district.

EARLY HISTORY (1631 to 1775)

Prior to the decision of the little company led by Governor John Winthrop and Deputy Governor Thomas Dudley, on December 28, 1630, to start on the banks of the Charles river a settlement soon to be known as "New Towne" and later as "Cambridge," other settlements had been formed in the near vicinity. Salem was founded in 1628; in June, 1629, Charlestown had been founded; while Boston, Dorchester, and Watertown had been founded and settlements begun early in 1630. These dates are important because the first highway to which the inhabitants of Newtowne had access was the "path from Watertown to Charlestown," so often referred to in the early town records. This way or path led from the center of Watertown to Charlestown, closely following the present lines of Mt. Auburn street in Watertown and Cambridge street (first called "Mill street" and afterward called "Cambridge street" and "Road to the College" in Watertown) to Elmwood avenue; thence following Elmwood avenue, Brattle street, Mason street, and Kirkland street in Cambridge—Washington street in Somerville—and Main street in Charlestown—to the Charlestown and Boston ferry established in 1631. This path from Watertown to Charlestown is undoubtedly the oldest way in Cambridge, and over it for at least four years—until the ferry at the foot

of Dunster street across Charles river was established—all the travel from Cambridge to Boston had to pass.

The first mention of this way appears in the Town Records for December 2, 1633, as follows: "It is ordered that noe perfon whatfoever fhall fell anny tree neer the Towne ( ) within the path which goeth from Watertown to Charleftowne, upon the fforfiture ffive shillings for every tree foe ffelled."

The next way mentioned in the Town Records is under date of March 2, 1633-4, as follows: "Granted John Benjamin all the ground between John Masters, his ground, and Antho Couldbyes, provided that the windmill hill shall be reserved for the Town use, and a cartway of two rods wide unto the same." Fifty years later or on June 20, 1684, this cartway was laid out by the Town as follows: "It was then voted whether the highway running through Rich. Eccles field down to the windmill hill should be made an open highway, and it was voted in the affirmative." The highway here referred to was what is now known as Ash street and Bath street from Brattle street to the old Town Landing (at Windmill Hill), and seems to be the first highway formally laid out as such by vote of the Town.

Other streets were laid out at an early day, as is testified to by William Wood in his "New England's Prospect" in 1633. He says, "Newtowne is one of the neatest and best compacted towns in New England, having many fair structures with many handsome contrived streets."

Another historian, writing in 1652, says of Cambridge, "The Town is compact closely together within itself till of late years some few straggling houses have been built. * * * It hath well ordered streets and comely completed with the faire building of Harvard College."

The following seem to have been the streets composing the early village with the old and modern names:

Braintree street, now called Harvard street and Harvard Square.
Spring street, now a part of Mt. Auburn street.
Long street, now called Winthrop street.
Marsh lane, now called South street and part of Eliot street.
Creek lane, now called Brattle Square and part of Eliot street.
Wood street, now called Boylston street.
Water street, now called Dunster street.
Crooked street, now called Holyoke street.

There were numerous other "lanes" and "ways" noted in the original records, many of which cannot now be identified on account of the meagre description given. Parts of Garden street, Huron avenue, and Vassal lane formed the old "Highway to Fresh Pond." Garden street, northerly of Huron avenue, was called the "Highway to the Great Swamp."

What is now called Massachusetts avenue from Harvard Square to the Arlington line and leading to Arlington, Lexington and the towns beyond was long called the "Highway to Menotomy." It is not known when these settlements were first begun, but it must have been at a very early day. That the town then exercised control over the territory is shown by an order of the town dated January 14, 1638, that "no timber shall be felled beyond Menotomy river (Alewife Brook) without a warrant from the major part of the Townsmen."

What are now called Newton (then called "Cambridge Village") and Brighton (then called "Little Cambridge") were added to Newtowne in 1634, and in 1642 all the land lying upon Shawshine river and between that and Concord river and between that and Merrimac river, not formerly granted, was granted to Cambridge. This grant was confirmed March 7, 1643, and included Billerica, parts of Carlisle, Tewksbury, and Chelmsford, and all of Bedford, Lexington, and Arlington.

Thus the bounds of Cambridge at that time (and until 1655, when Billerica was incorporated as a separate town) extended towards the north for a distance of about twenty miles, and included the considerable settlements of "Menotomy" (Arlington), "The Farms" (Lexington), Bedford and Billerica. (See Map I.)

MASSACHUSETTS AVENUE.—There is no doubt that the road or way connecting these villages with the center at Cambridge Court House (now Harvard Square) was laid out and in use at a very early date in substantially the same location as Massachusetts avenue is to-day.

The practical inconvenience of so extensive a township with the long distances it necessitated to travel to town meetings, church, etc., soon became apparent, and protests began to be made against it.

The town records of a meeting held November 29, 1654, contain this rather quaint entry:

"In ans. to a L're sent to the Towne ffrom or Neybours of Shaw

Shine, Alias Bilracie, wherein they desire that whole tract of land may be disingaged from this place & be one Intire body of it selfe: the Towne consented to choose five persons—a Committee to treate & conclude with them concring yr requeft therein, at wch time was chosen Mr. Henry Dunfter, Edw. Champney, Jno. Bridge, Edw. Goffe & Edw. Winship."

This request of the Shawshine people was granted, and an amicable agreement reached, and Billerica was incorporated as a town the following year, 1655. Lexington was incorporated in 1713 and Arlington was incorporated as "West Cambridge" in 1807. Newton (called "Cambridge Village") was incorporated in 1688 and Brighton (called "Little Cambridge") was incorporated in 1807.

From 1642 until 1655, then, Cambridge was at her zenith as far as territory was concerned. The setting off of the several towns left Cambridge less than her present area and the seventeen miles of highway which connected this northern territory with the Cambridge Center in 1655 had in 1807 been reduced to about two and one-fourth miles in length to reach the limit of Cambridge territory at the Arlington line.

It may not be out of place here to recall the fact that it was over this road that Paul Revere made his famous "midnight ride," followed later by the British soldiers on their disastrous march to Lexington and Concord, April 19, 1775. Lieutenant-Colonel Smith with 800 regulars landed at Lechmere Point the night before and in the early morning passed up this way from Beech street in Cambridge to Lexington Green. Later in the day a detachment of reinforcements, consisting of about 1200 marines, under Lord Percy, entered Cambridge by the "Great Bridge" over Charles river, where the Anderson Bridge now is, and passed up the whole length of the way to Lexington, where they met the first detachment of Smith's in active retreat. Together they finished the return, with such speed as they could, leaving the Menotomy Road at Beech street on their way to Charlestown and safety.

In 1805 the Middlesex Turnpike was chartered, as is related in another place (p. 15), and the portion of the way from the Arlington line to Porter Square formed a part of that turnpike from 1805 to 1842, when it was made a county road, and upon the incorporation of Cambridge as a city in 1846, the street passed to the control of the city as North avenue, and in 1894 the entire way from Harvard Bridge, Cambridge, to Lexington was named Massachusetts avenue.

The land lying south of the "Path from Watertown to Charlestown," and east of the "neat and compacted little village," with its eight short streets, was for a long time used almost entirely for cultivation and grass.

Early in its history, in the year 1632, the town voted to impale or fence in this land, and a line of palings 9487 feet long, extending from the village easterly to near the present location of the Boston & Albany (Grand Junction) Branch R. R., was constructed and the cost borne by forty-two owners. About one thousand acres of land were enclosed by this paling, the location of the paling being substantially the same as the present line between Cambridge and Somerville. This impaled land was divided into lots of various sizes and apportioned to sundry householders of the village. Into this impaled land sundry ways were laid out.

One, leading from the village by what is now Arrow street and Massachusetts avenue to about where Pleasant street now is located, was called the "Highway into the Neck." From this point, one way led southeasterly about on the line of the present Massachusetts avenue to the edge of the marsh and was called the "Way to Pelhams Island,"* and another way led southwesterly following about the present line of Putnam avenue and was called the "Highway into the Little Neck." Another way went about on the line of Pleasant street to Cottage street, and thence led by a way skirting the uplands to near where Fort Washington now is and was called the "Roade to the Oyster Banks."

From the "Highway to the Neck" a way led to the northeast nearly on the present location of Dana street and was called the "Highway to the Common Pales."

There were other small ways whose names suggested the pastoral character of occupations of many of the early inhabitants. "Back Lane," "Cow Yard Lane," and "Field Lane" were some of these located close to the little cluster of houses forming the early settlement.

As already stated, upon the founding of Newtowne in 1630, the Path from Watertown to Charlestown was already in use and provided a ready route for communication with the Towns of Charlestown, Salem, and Boston. It was about 4¾ miles by this

*See under head of Main Street, page 538, for description of Pelhams Island.

way to the Town House in Boston at the present site of the Old State House at Washington and State streets.

BOYLSTON STREET AND THE "WAY FROM CAMBRIDGE TO ROXBERY."—It was early seen, however, that it was desirable also to have direct means of communication with towns on the southerly side of Charles river—Dedham, Roxbury, Dorchester, and also Boston from the south side. The establishment of the ferry across the river at what is now Dunster street not only united the two parts of Cambridge as it was then constituted—separated by the river—but gave the opportunity for more extended communication to the above-mentioned towns, through what was early known as "Muddy River Village," now Brookline, and by way of "The Neck" to the Town of Boston, a distance of eight miles by this route from Harvard Square to the Boston Town House.

This meant the laying out of a way from the ferry to the Watertown-Roxbury road, and the first reference to it is as follows in the Town Records for 1638: "It is ordered in respect of making a sufficient path from the south side of Charles river from Cambridge to Roxbery that the line shall lie right to the upland therefor that common lands that fall within ( ) line of Mr. Harlackinden's side shall belong to him, and his forever and in respect of which so much of his own land as falleth in the outside of the line, he assigneth up unto the Town's use; also in regard Mr. Harlackinden hath upon his own particular charge made a ditch he shall be freed from all ( ) about making a causey or any other charge to make that path sufficient, and his bounds to remain according to the rail and ditch now is on every side of his land."

Over this route the travel soon began to make its way, for on October 25, 1640, the Town of Boston ordered that a "Bridge be made at Muddy River, and Mr. Colburn, Elliot, and Oliver are appointed to see it done."

May 25, 1642, a committee from Boston was "appointed to join with Dedham, Cambridge, and Watertown to lay out highways from town to town through Boston lands at Muddy River."

Similar committees were appointed by Cambridge from time to time, and frequent reference to the matter is made in the Town Records, but no agreement seems to have been reached as to a for-

mal laying out of the highway, although such a way was then in actual use.

On January 19, 1662, it is recorded in the Cambridge Records that "Mr. John Stedman, Edd. Oakes, Thos. Fox, and Edward Shepard are appointed to attend the laying out of the highway from our bounds leading towards Roxbery, as the law directeth." This was the year of the construction of the "Great Bridge" over Charles river, at what is now Boylston street. The committees of the towns still not agreeing with the Boston committee, referees were appointed, and on December 16, 1662, the referees reported that "We, William Park, John Peirpont, and Thomas Weld, chosen to determine the highway leading from Cambridge through Boston bounds, the committees between the two towns not agreeing, doe conclude that the way shall goe without the common fields by Goodman Devotion* and Goodman Stevens houses, and soe to Cambridge bounds as the ould way now runneth, whereunto the committee of Boston concurred, having left the same unto us."

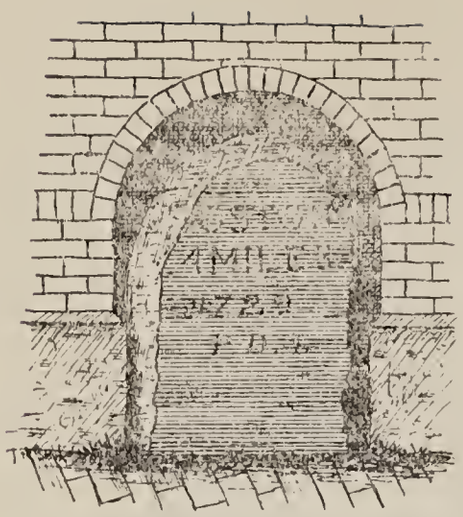
The location as here given in Little Cambridge (now called Brighton) and Muddy River Village (now Brookline) has been well determined and followed the present location of Harvard street, north Harvard street, Cambridge street, and Harvard street in Brighton and Harvard street and Washington street in Brookline. In Boston, the route followed the present location of Roxbury street and Washington street to the old Town House.

As the new bridge built in 1663 across Charles River was located some six hundred feet westerly of the old ferry, a portion of the old road and the "causie," as it was called, across the marsh, had to be abandoned and located anew. This relocation seems to have given rise to considerable controversy between the owners of the lands and the Town, as frequent reference is made in the records of the Town to the location of lands taken, payments for the same, etc.

This matter seems finally to have been disposed of by a vote passed December 13, 1663, that "Mr. Edward Jackson, Edward Oakes, and Thomas Danforth are appointed by the Townsmen to lay out all necessary highways on the south side the water, and

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*The house here referred to as the "Goodman Devotion House" is still standing and is known as the "Edward Devotion House," home of the founder of Brookline Schools, on Harvard street near Coolidge Corner, Brookline. It is open to the public Saturday afternoons.



This milestone is now standing in a recess in the brick wall surrounding the grounds of the House of the Good Shepherd, Huntington Avenue, Roxbury.

agree with the proprietors of the land for the same by exchange for common land or otherwise according to their discretion."

The location of this historic way has been further defined by seven milestones set in 1729 by P. Dudley, marking the route, three of which are still standing, together with a "parting stone," also set by P. Dudley in 1744 on Roxbury street near Eliot Square, marking the junction of the ways to Boston, Dedham and Cambridge. These stones are indicated and numbered upon the accompanying map.



This parting stone is now standing in the back of the sidewalk facing Eliot Square, Roxbury.

The old milestone now standing in the northeasterly corner of the burying ground near Harvard Square marked "Boston 8 miles 1734 A. I." on its face and "Cambridge New Bridge 2¼ miles 1794" on its back, once stood on the easterly side of the old Court House in Harvard Square and marked the beginning of this highway to Boston.



This milestone is now standing in the grounds of the Harvard Congregational Church, Harvard St., Brookline.



This milestone is now standing in the corner of the yard of the Harvard Grammar School, Harvard Street, Brighton.

While the major part of this highway was outside of even the original limits of Cambridge, its history is of special interest because, for more than one hundred and fifty years, it was the route over which the most of the travel from Cambridge to Boston, Roxbury, Dedham, and other towns passed.

GORE STREET AND THE GRAVES HOUSE.—What is claimed to be the first house erected in Cambridge was built for the use of Thomas Graves, who came from England in July, 1629, to Salem under an agreement with the Massachusetts Bay Company. Under this agreement, Mr. Graves was to receive fifty pounds a year and have a house and one hundred acres of land assigned to him and "to have a part thereof planted at the Company's charge." The one hundred acres of land with the house was located on what was soon called "Grave's Neck," afterwards Lechmere's Point, and now called East Cambridge, and Graves and family of wife and five children lived there a number of years.

In 1635 the house and land became the property of Atherton Haugh, who purchased more land till in 1642 he owned about three hundred acres. In 1699 the widow of his grandson, Samuel Haugh, sold it to John Langdon, and in 1706 he sold it to Spencer Phipps, afterward Lieutenant Governor of Massachusetts. A daughter of Spencer Phipps married Richard Lechmere, who on the death of his father-in-law in 1757 bought out the other heirs and so became owner of what was long known as "Lechmere Point."

The land upon which this house was built was entirely surrounded by marsh, covered at high tide with water, and was reached from the Watertown-Charlestown road by a bridge over Willis' Creek (Millers River) and a causeway across the marsh, with a road leading to the house, which was on the northerly side of Spring Street between Third and Fourth Street. This road and causeway played an important part in the movement of the British troops on April 18, 1775, when the eight hundred British soldiers from the Boston side were landed near the old Graves house, then standing, and marched over the road and causeway to the Milk Row road, thence to the "road to Menotomy," and so on to Lexington and Concord. Later in the year 1775 and the early part of 1776, this old road was of great assistance in the work of fortifying the Point as a part of the siege of Boston. The fort built here was considered the most important of any around Boston and as such was carefully planned and armed with the larger cannon—even the causeway was protected by a small redoubt flanking it.

This road is shown upon a map of Boston and vicinity illustrating the account of the siege of Boston by John Marshall in his "Life of George Washington," published in 1807.

The old Graves house, which was the occasion for the building of this road and causeway which helped to make so much history, stood until about 1820, when it was torn down. The old road and causeway probably formed a part of Medford Street, in Somerville, and Gore Street as now laid out.

CARE OF EARLY STREETS.—It is instructive to learn that very early in its history the Town began to take care of such roads and ways as it then had. On November 3, 1634, it was "ordered that every inhabitant in the Towne shall keepe the street cleane from wood and all other things against his owne ground, and whosoever shall have anny thinge lye in the street above one daye after the next meetinge day shall forfeit V s. for every such default." Also, "John White is chosen surveyer to see the highways and streete kept cleane and in repair for the yeare."

It may be remembered that "Mr. Joseph Cook," who then lived on Holyoke Street, was in 1635 authorized by the Town to keep the ferry across the River. In 1636 we find him looking after the streets of the Town, for it was "agreed with Mr. Cook to take up all the stubbs that are within the bounds of the Town, that is within the Town gates, and he is to have nine pence apiece for taking the same and filling up the holes all above three inches." In the following year, however, an agreement was made with Mr. Symon Crosby "to take up all the stubbs within the Town streets in any way of passage for horse carts or man, at four pence the stubb," a cut of five pence apiece.

In 1639, Joseph Cook and Edward Goffe were given "power to cause all that have carriages that way to come together and mend the highway in the neck of land."

The town appears to have suffered even in that early day from the idea which seems all too prevalent now in these later days that public property can with impunity be appropriated to private uses.

September 20, 1678, it is recorded that "the selectmen of Cambridge having many complaints come to them do order that whosoever shall dig any clay or sand in any highway within the bounds of the Town of Cambridge shall pay five shillings for every load digged in the highway."

Among the many questions regarding the care of various kinds of live stock which were allowed to run at large on the commons

and highways of the Town, the proper control of swine seems to have been the most troublesome. In addition to the yearly election of "hog reeves," or wardens to look after them, numerous regulations and restrictions were passed and many fines for their infraction were imposed.

In 1647 it was ordered, "that all hogs in the town shall be sufficiently yoaked and ringed or else shutt up." The reference here is to the practice common at that time of placing rings in the snouts of swine to prevent rooting and attaching a frame or yoke about the neck to hamper their passing through fences when allowed to run loose.

In this connection it is interesting to read another order dated February 23, 1662-3, as follows: "ordered that all swine be yoaked wth a crotch yoake or wth 2 crofs pieces & y^{t} y^{e} same be in length & bredth proporcconably to the sizes of ye swine."

Another rather curious order passed on the same date is as follows: "Ordered that if any man be convicted that his dog is used to pull the tails of any beasts, and do not effectually restrain him, he shall pay for every offense of that kind twenty shillings in case that further complaynt be made."

LATER HISTORY (1775 to 1900)

From what has already been said, it will be seen that for more than one hundred and fifty years after the first settlement of the Town, its growth and development had been very slow. In the year 1790, the entire population of Cambridge, then including Arlington and Brighton, was by the census given as 2115, so that within the city limits as now defined the population must have been less than one thousand persons. The length of roadways then laid out and in use could not have exceeded 12.0 miles. Of manufactures, there was practically none. The principal interests of the people were about the college and the farms. The lack of convenient connections with Boston and the poor condition of the roads leading to other towns restricted intercourse and must have tended to make the general social life narrow, self-centered and provincial.

It was only after more than half a century of effort on the part of certain citizens of the town to improve the primitive conditions then existing, and overcome the great natural barrier of the broad waters of the Charles River, that a bridge and causeway was con-

structed in 1793 from the "westerly part of Boston to Pelham's Island in the Town of Cambridge." The completion of the West Boston bridge was followed by the construction of another bridge in 1809 from near Barton's point in Boston to Lechmere Point in Cambridge, called the Canal or Craigie Bridge.

It is undoubtedly true that the construction of these two bridges was the most important of all the factors that contributed to the more rapid increase in population and material prosperity which soon followed. Their construction soon led to the laying out and construction of a number of thoroughfares and main roads leading to and through Cambridge, and the cutting up of various large estates, by means of smaller streets, into house lots for sale and occupation. At about this time also another movement came into popular favor which became helpful to Cambridge interests in the same direction. Reference is here made to the policy of laying out and constructing trunk line highways, connecting towns more or less widely separated, by a company incorporated by the Legislature for this special purpose. These were called Turnpike Roads and were built by the incorporated companies, using private capital, acting under charters granted by the Legislatures, giving to them certain powers and imposing certain duties and restrictions. All over the country at this time, these corporations were chartered to take over and build Turnpike Roads, especially where the municipal authority had not the means or the courage to construct them.

In most of the states, special laws were passed giving the corporations certain rights and defining their powers as to taking land, paying damages, limiting the amounts of tolls to be charged, number of toll gates, etc.* Acting under these special laws, it is said that in the New England states alone, some one hundred eighty-two Turnpike Corporations were chartered. The most of them proved to be financial failures, and were abandoned and many of the roads surrendered to the County Commissioners of the County in which the roads were located.

Indirectly, however, they were of great benefit to the country in stimulating an interest in better transportation facilities, especially between the more important towns.

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*A typical schedule of toll charges is given on pages 537-538 relating to Main Street and West Boston Bridge.

CONCORD AVE. AND BROADWAY.—Cambridge was the terminal point of several of these turnpike roads constructed during this period. The first was called the "Cambridge and Concord Turnpike Corporation," and was chartered May 5, 1803, to construct a turnpike or toll road from a point near the dwelling house of Jonas Wyeth, in Cambridge to Concord, Mass., passing by the summer house of Dr. Andrew Craigie, who, as customary, later had a suit with the corporation for damages.

March 5, 1805, a charter was given the same corporation to extend the Turnpike from the Cambridge Common easterly to the Causeway of West Boston Bridge "in as straight a line as the circumstances will permit," but not to go nearer than a distance of ninety feet from the new building of Harvard College then being built, now called Stoughton Hall. The easterly terminus of this turnpike was to be at the "causeway of West Boston Bridge near the house of Royal Makepeace." This portion of the street was first called Concord St. and finally called Broadway.

The westerly portion of the road was completed December 1, 1806, and in February, 1807, it was declared open for business. The part from the Common easterly was not completed until several years later, for in March, 1811, the Corporation petitioned to be relieved of its construction, but the petition was dismissed in January, 1812. Two toll gates, which were not to be "closely located" were allowed to be built in this road.

September, 1826, the Company turned over all its papers to the County Commissioners and asked to have the road laid out as a public way, which was done in May, 1829, making it a County road.

HAMPSHIRE ST.—Another ambitious scheme, called "The Middlesex Turnpike," was chartered January 15, 1805. The road began at the Tyngsborough Meeting House and, passing through Chelmsford, Billerica, Bedford, Lexington, Arlington, and by the old Menotomy road to Porter Sq., Cambridge, thence in nearly a straight line to the Cambridge and Concord Turnpike Road at what is now known as Mechanics Sq. This road is now known as Hampshire St., in Cambridge.

One of the toll houses on this turnpike stood at the intersection of Beacon and Washington Sts., Somerville.

On petition of the Corporation, it was dissolved by the Legisla-

ture, March 13, 1841, and the turnpike became a county road in September, 1842.

WESTERN AVE. AND BRIDGE.—Another corporation was chartered June 12, 1824, to construct a turnpike through the towns of Cambridge, Brighton and Watertown. This enterprise had several unique features. It was virtually promoted by the proprietors of the West Boston Bridge to offset the loss they feared would result in decreased patronage on the West Boston Bridge, then a toll bridge, by reason of a newly authorized turnpike road connecting Watertown with the "Mill Dam Road," in Boston. The plan of this Cambridge to Watertown Turnpike shows the route "from the pump in Watertown, to Cambridge, on the way to the pump in Dock Square"—two rather unusual terminii to be given a Turnpike Road, especially at that time!

Again there were to be no tolls charged, so, of course, there were no toll houses or gates. The entire cost of the road, including two bridges over the Charles River, was to be borne by the company.

The West Boston Bridge Corporation, in 1846, sold their entire interest in these and other properties to the Hancock Free Bridge Corporation, and named the turnpike "Western Ave." In 1855, it was laid out by the City of Cambridge as a public highway.

RIVER ST. AND BRIDGE.—On March 2, 1808, Jonathan L. Austin, a Cambridge man who lived on Inman St., opposite the head of Austin St., with other real estate owners, were incorporated and authorized to construct a bridge and connecting highway, now called River St., leading from Brighton to Main St., at its junction with Western Ave., as Mr. Paige states in his "History of Cambridge"—"For the advantage of the proprietors of the West Boston Bridge and the owners of real estate in Cambridgeport." This bridge, then called the "Brighton and Cambridgeport Bridge," and street (first called "Brighton St.") were completed and opened for travel Dec. 11, 1810, and they were maintained by the corporation until 1832, when, after much discussion, the Town assumed their care and maintenance.

BROOKLINE ST. AND BRIDGE.—Another toll-collecting enterprise was called the "Cambridge and Brookline Bridge Corporation," composed largely of Cambridge men, and was chartered April

25, 1850, to connect Cambridge and Brookline by a bridge, with causeways leading to existing streets in both places. Tolls were to be collected but were not to exceed a specified schedule. This led to the laying out and extension of Brookline St. to the street already laid out from Massachusetts Ave. to Auburn St. and called "Canal St." in 1852, and the development of large tracts of land in the vicinity. The bridge and its approaches were made free and taken over as highways by the municipalities, April 6, 1870. The old toll house stood on the westerly side of Brookline St., a little south of Granite St.

WEST BOSTON (NOW CAMBRIDGE) BRIDGE.—The construction of this bridge and the approaching causeways at each end were authorized by an act of the Legislature, dated March 9, 1792, and the bridge was open for travel, November 23, 1793. The main bridge was 3483 feet long, with a causeway on the Boston side extending nearly to South Russell St. and with another causeway on the Cambridge side extending from the westerly end of the bridge to the easterly side of "Pelham's Island," near Moore St., a distance of about 3,600 feet. At the opening of the Bridge and causeway in 1793, a toll house was located on the north side of the causeway, at its extreme westerly end, near Moore St. Upon the laying out of Harvard St. and other streets leading into the causeway, about 1805, the toll house was moved, and in 1835 it stood about 900 feet easterly of the junction of Broadway. Later it was moved again and placed on the southerly side of the bridge, nearly opposite where First St. now comes into Main St. In 1810 there was another Toll House shown on the northerly side of the causeway, at Grove St., Boston.

As illustrating the "spirit of the age" as it existed one hundred and twenty-five years ago, the schedule of tolls to be collected at these toll houses may be found of interest:

"Each foot passenger (or one person passing), two-thirds of a penny; one person and horse, two pence two-thirds of a penny; single horse, cart or sled, or sley, four pence; wheelbarrows, handcarts, and other vehicles capable of carrying like weight, one penny, one-third of a penny; single horse and chaise, chair or sulky, eight pence; coaches, chariots, phaetons and curricles, one shilling each; all other wheel carriages or sleds drawn by more than one beast, six pence; neat cattle and horses passing the said bridge, exclusive of those rode or in carriages or teams, one penny, one-third of

a penny; swine and sheep, four pence for each dozen, and at the same rate for a greater or less number; and in all cases the same toll shall be paid for all carriages and vehicles passing the said bridge, whether the same be loaded or not loaded; and to each team one man and no more shall be allowed as a driver to pass free from payment of toll, and in all cases DOUBLE TOLL SHALL BE PAID ON THE LORD'S DAY; and at all times when the toll gatherer shall not attend to his duty the gate or gates shall be left open."

Considering the limited resources of the time it must be conceded that this whole enterprise was a very large and creditable one and that the enthusiasm of the "Columbian Centinal," a newspaper of the time, was excusable when it declared that "The elegance of the workmanship, and the magnitude of the undertaking are perhaps unequalled in the history of enterprises."*

MAIN ST.—Main St., as originally so called, extended from the abutment of the West Boston Bridge to Harvard Square. In 1894 the name of Massachusetts Ave. was given to the portion between Lafayette Sq. and Harvard Sq. The remaining portion, which is now called Main St., was first laid out as an approach to the West Boston Bridge in 1793.

This causeway was built entirely upon marsh land and was originally laid out 130 feet wide, but the roadway itself was constructed only 40 feet wide and was made of the material taken from the two wide ditches or canals dug one on each side of the roadway, which was enclosed by retaining walls or bulkheads on each side, with cap stone and railing on top.

Later the roadway was filled out to 70 feet in width, and about 30 feet beyond on each side of the way as filled was released back to the abutting owners, making the final width as at present constructed 70 feet.

From the end of the causeway near Moore St., the road was constructed across Pelham's Island "in the most direct and practicable line to the nearest part of the Cambridge Road," which was the old road formerly called the "Way to Pelham's Island."

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*For a more complete description of the Cambridge Bridges see paper, "An Historical Account of Some Bridges Over the Charles River," in Publications of the Cambridge Historical Society, No. 7, page 51, et. seq.

On the Boston side the causeway was built from the end of the bridge near Grove St. to near what is now South Russell St., Boston. This made the total length of bridge and causeways about 8,800 feet, or 1 2-3 miles.

The "Pelham's Island" here referred to was a tract of upland containing about 20 acres, slightly elevated above the marsh land, and extending from near the present location of Moore street to near Columbia street. It was largely surrounded by marsh land and on the west was bounded by a brook or narrow creek which crossed the present location of Massachusetts avenue near Lafayette Square, making it an island at high tide. It was so called because it was owned at one time by Herbert Pelham, who came from England to this country in 1638 or 1639 and settled in Cambridge at the northwesterly corner of South and Dunster streets.

The following is an interesting anecdote which is related concerning Mr. Pelham: It seems that on November 17, 1638, about the time of the arrival of Mr. Pelham with his three motherless children in this country, a Mr. Roger Harlackenden, another prominent and highly respected man in the colony, had suddenly died of smallpox, leaving a widow and two children and also the house at the corner of Dunster and South streets. By his will he provided that 100£ should be paid from his estate to the church.

Mr. Pelham soon married the widow Harlackenden and with the combined families occupied the Dunster street house and in the spring of 1640 he paid the bequest by giving to the church a milch cow!

He was quite prominent in public affairs for about 10 years, returning to England in 1649, and dying in 1673. He left one son named Edward in this country.

In 1756 Ralph Inman, for whom Inman street was named, became the owner of this land and in 1792 the land was conveyed to Leonard Jarvis, a large landowner at that time, and it was from him that the Proprietors of the West Boston Bridge obtained the land needed for making the connecting road from the causeway to the "Way to Pelhams' Island" above referred to.

The construction of the bridge and causeway immediately led to the presentation of a petition by James Winthrop, Esquire, to the Court of Sessions, to "improve the road which leads from Pelhams Island in the Town of Cambridge to the public meeting house

in the first parish of said Town." A committee was appointed by the Court which reported September 18, 1793, recommending that the way be laid out, with some alterations in the lines, by certain bounds and measurements.

As the description of the boundaries of the street included in the report of the committee is rather unique, a part of it is quoted here:

"The northerly bound of said way begins at the northwesterly corner of the Causeway thrown up by the proprietors of the new bridge (so called) and runs from thence by a straight line to a pear tree nearly opposite the mansion house of Leonard Jarvis, Esquire, and from thence by a straight line to the centre of a barberry bush standing in the present old proprietors way near the wall at the northerly side thereof, and from thence by a straight line to the southeasterly corner post of the fence inclosing the yard in front of the mansion house of Francis Dana, Esquire, and from thence by the fence as it now stands to a small stake and stones nearly opposite to a blacksmith's shop on land of Wm. Winthrop, Esquire, and from thence by sundry stakes across said old proprietors way and part of the land of said Winthrop to an apple tree in said Winthrop's land near said old proprietors way, thence again crossing said old proprietors way by sundry stakes to a well in land of Edmund Dana, from thence by sundry stakes to a large stake in the fence near (and a little eastward) the parsonage house (so called) and from thence by a straight line to common land before the meeting house, to strike said common land fifty-three feet distant from the front of a dwelling house belonging to Andrew Boardman, Esquire, which finishes the northerly bound of said new Way."

Probably no better evidence can be given of the unsophisticated character of the men of Cambridge at that time than is indicated by the foregoing description of the bounds of one of its principal highways.

While some changes have been made in the lines of Main street at certain points by widenings at various times, the street remains at present substantially as then laid out and forms one of the principal approaches to the City from the east.

It was over this street that for many years one of the stage lines passed leading west from Boston. The following clipping from the "Massachusetts Register" of 1819 gives "A list of the

stages that start from taverns in Boston." "New line of half-hourly coaches between Cambridgeport and Boston leave as follows, viz.: Half past seven A. M. and continue to leave each office every half-hour through the day until 8 P. M. Passengers taken and left at any place in Cambridge, Cambridgeport, and Boston. Office in Boston at 51 Brattle street. Fare to Cambridge 25 cents, Cambridgeport 12½ cents."

It was upon this street also that one of the first horse-car lines to operate in this country was located in 1856, first running from Central Square, Cambridge, to West Cedar street, Boston.

CANAL (OR CRAIGIE) BRIDGE.—The movement which ultimately led to the construction of the Canal Bridge and the two important avenues of Cambridge street and Bridge street was begun in 1738 when a number of Cambridge citizens applied to the General Court for liberty to establish a ferry between Cambridge and Boston. Another petition was presented the same year for the right to construct a bridge from "Colonel Phipps Farm" (now East Cambridge) to Boston. In 1785 another petition to the same effect was presented, but nothing came of either until after the construction of the West Boston Bridge in 1792-3, as before related.

The success of the Charlestown and West Boston Bridges and the acquirement by Mr. Andrew Craigie of the control of the large tract of land on and westerly of Lechmere Point led to a revival of the scheme to construct a bridge from Lechmere Point to Boston, and on October 27, 1807, Mr. Craigie and twelve associates were incorporated with authority to build the Canal Bridge.

It was called "Canal Bridge" because one-third of the shares were to be held by the individual proprietors of the Middlesex Canal Corporation, but it soon came to be familiarly called "Craigie's Bridge." The bridge was completed and opened for travel in August, 1809.

The original length of the bridge was about 2800 feet, but prior to 1834 a large portion of the bridge at the Cambridge end, about 1150 feet in length, was removed and filled solid to form a part of Bridge street. Leverett street on the Boston side was also extended about 400 feet to the present harbor line. The Toll house stood on the northerly side of the bridge about 400 feet easterly of Prison Point street.

Together with several other bridges it was purchased by the Hancock Free Bridge Corporation in 1846, and in 1858 it was made a free bridge. In 1910 the entire bridge was removed and replaced by the solid embankment of the Charles river dam as a part of the Metropolitan Park system.

CAMBRIDGE STREET.—Upon the completion of the Canal Bridge in 1809, Mr. Andrew Craigie and four others were incorporated March 3, 1810, as the "Lechmere Point Corporation." They then held great tracts of land in the easterly section of the town, extending from the easterly end of the point to a line west of what is now Inman Square, and they made plans for an extensive land development and sale. In this, Andrew Craigie was the prime mover.

It was first necessary to secure a connection between the new bridge and Harvard Square with its connecting thoroughfares. Two men, William Winthrop and Francis Foxcroft, owned the lands on the line of the proposed new street from its junction with the Concord turnpike (now Broadway) to near its crossing of the Middlesex turnpike (now Hampshire street). These two men joined with Mr. Craigie and his associates in laying out and grading the way afterwards called Cambridge street from its junction with Broadway running easterly to its junction with Bridge street in a straight line, a distance of 10,800 feet. Unfortunately, however, Mr. Craigie and the two others did not control all the land on this line, for a length of about 750 feet near Elm street was held by owners adverse to the Lechmere Point Corporation. The town failing to lay out the street, a petition dated June 6, 1809, was presented to the General Court or Legislature to lay out the street. To this the town remonstrated and the legislature declined to locate the road. The road finally was laid out by the town July 10, 1809. Further litigation then ensued as to the right of Mr. Craigie and Mr. Winthrop to claim or recover damages for land taken in the layout of the street of their own promotion. This was finally settled on January 5, 1813, by the Court of Sessions finding that the two men "had sustained no damages."

The laying out of this street of ample width and on a straight line connecting these two civic centers was a great public improvement. Much of the land in the central part was low and flat, and at that time covered with wood and blueberry bushes. It was in

this vicinity that the bear killed September 19, 1754, as mentioned in Paige's "History of Cambridge," was reported to have been first seen.

BRIDGE STREET.—Bridge street was originally laid out, in connection with the Cambridge street project, to connect with the territory lying to the north and northwest of Lechmere Point.

It began at its junction with Cambridge street, now called Lechmere Square, where the westerly abutment of the Canal Bridge was first located in 1809.

From this point to Gore street, Bridge street was laid out in 1810 by the "Court of Common Pleas." From Gore street to Third street it was laid out by the town in 1829, and from Third street to the center of Miller's river it was laid out by the county in 1839. At some time prior to 1834, Bridge street was extended easterly about 1150 feet over the filling to the new position of the abutment of the Canal bridge, and in 1856 this portion of the street was laid out by the city as a public way.

EAST CAMBRIDGE STREETS.—Immediately following the successful efforts of the "**Lechmere Point Corporation,**" with Mr. Craigie at its head, to secure the laying out of Cambridge street by the town, the project of cutting the property owned by them into streets and lots was undertaken. In 1811 a complete plan of the streets and lots for the district was prepared by Peter Tufts, Jr., a well known surveyor of that time, and recorded in the East Cambridge Registry of deeds, and the sale of lots began and has since been carried out in substantial accordance with the original plan.

This plan, however, only covered lands extending to about where Charles street now is. The rest of the large area extending to Broad canal was subsequently purchased by another corporation called the "**East Cambridge Land Company,**" who in 1869 laid out this tract along the same general lines as that followed by the Lechmere Point Corporation.

MT. AUBURN STREET.—Another important act which aroused great interest in the town, which was then divided by opposing interests into two practically hostile camps, was the laying out of a new way from the junction of what is now Mt. Auburn

street and Elmwood avenue to Brattle Square, forming a part of what is now Mt. Auburn street.

The parties having interests in the new West Boston bridge and connecting streets wished to "establish the road as now laid out from the garden of the Hon. Elbridge Gerry (Elmwood avenue, corner Mt. Auburn street) to the garden of the late Thomas Brattle, Esquire" (at Brattle Square). On the other hand, Mr. Craigie and his friends wished the new road to run from what is now the junction of Mt. Auburn street and Elmwood avenue in a straight line to the junction of Brattle street and Mason street, and offered to give the land and build the road as far as his land went. This, of course, would tend to send the Boston-wise travel over Cambridge street and Craigie's bridge and so help develop the Craigie interests in that direction.

On December 26, 1805, the town voted to present a petition to the Court of Sessions in favor of the first plan, but at a meeting held February 17, 1806, this action was reversed, and November 17, 1806, the town voted in favor of the second plan, and May 27, 1807, the selectmen laid out the road as desired by Mr. Craigie. The town, however, seems to have again changed its mind, for on May 2, 1808, it voted to lay out the street by the first plan, appropriated $3,000 to construct the street, and directed the selectmen to build the street at once. Mr. Craigie and others immediately protested against this, and seem to have taken physical means to prevent the carrying out of the order, for on June 7, 1808, the town directed the selectmen to complete the work and prosecute "Andrew Craigie and others for trespass committed, or which may hereafter be committed by him or others upon the road."

On September 6, 1808, the town voted to extend the street from Holyoke street to Main street, thus completing the road from the Watertown line to its junction with Massachusetts avenue at Putnam Square as the part from Brattle Square to Holyoke street was the original "Spring street" of 1635.

HARVARD STREET.—Harvard street is another important thoroughfare. Its easterly portion, originally called "Canal street," formed a part of the scheme of development promoted in the early part of the nineteenth century to make of Cambridge a port of entry for commerce, and this part of the street, in addition to some con-

trolled by other owners as far west as Norfolk street, was laid out at that time. The portion between Quincy Square and a point just east of Hancock street was laid out by the town in August, 1808, and the abutting land was put into house lots for sale by the heirs of Francis Dana between 1830 and 1840.

LINNAEAN STREET.—As is well known, the Cambridge common originally extended from Harvard Square to the present northeasterly line of Linnæan street. The common was used for parades, meetings, and other public purposes, but principally for the herding of cows and other cattle during the summer. In 1724, it was decided to divide the greater part of the common into lots and assign them to individuals. At this time two highways were laid out—the northerly one from the "Road to Menotomy" to the "Highway to the Great Swamp" (Garden street) for many years was called "Love Lane," a romantic name, which in 1850 was changed to Linnæan street.

WATERHOUSE STREET.—The other road was laid out in 1724 to form the northerly boundary of the common and was later called Waterhouse street.

Upon the land of the old common, no roads seem to have been laid out until 1845, when Shepard street, and in 1857 Chauncy street, were laid out.

CAMBRIDGE COMMON.—The reduction of the size of the common in 1724 brought the area down from about eighty-two acres to about nine acres which still remained in the control of the "Proprietors of Common Lands." On November 20, 1769, the proprietors voted to grant to the town all the lands belonging to them, and March 3, 1828, the selectmen reported that they had purchased all the remaining rights in the land and had "a good and sufficient deed of the same." Meanwhile, the common remained open and unfenced, traversed and cut up by lines of travel coming from several different directions. This tract proved a convenient spot on which students in the scientific school of Harvard College could practice in surveying and plan-making, and fortunately several of the maps drawn by students are preserved in the Harvard College Library.

On June 5, 1830, by an act of the General Court, five commis-

sioners were appointed to enclose the common with a fence and embellish it as a park. This was done, and the common was finished in practically its present condition, the expense being met by private contributions.

TOWN AND DISTRICT MAPS.—In 1794, the legislature passed a resolve that the several towns and districts in the state should have an accurate survey and map made of the town or district and file a copy of the plan with the Secretary of the State.

These maps were to show the boundaries of the towns or districts, the county roads, rivers, bridges, and other data. In response to the resolve the town of Cambridge engaged Mr. Samuel Thompson of Woburn to make the required survey and map, which is dated April, 1795, and is here reproduced.

In 1830, the legislature by a resolve dated March 1, 1830, required another survey to be made and a plan on a larger scale drawn showing all the roads, both public and private, with other data. Mr. John G. Hales prepared this plan for the town dated June, 1830, which is here reproduced and is valuable because it is the first accurate plan ever made which shows all the streets and houses existing at that date. The total length of streets here shown is about thirty-eight miles.

The town now had two plans showing its boundaries, highways, etc. There soon began to be trouble from the tendency shown by many property owners to encroach upon the public ways and appropriate—by the erection of buildings, fences, etc.—portions of the sidewalks to their own use. To remedy this tendency, the town in 1836 authorized the selectmen to employ a suitable person to make another "survey and prepare a plan with the streets properly defined as now laid out."

The selectmen engaged Mr. James Hayward to do this work, and he made the survey and prepared the plan and a very excellent report, which is dated January 15, 1838, both of which are on file at the City Engineer's office in City Hall. The following brief quotation from his report will show that he took advanced ground for the construction of wide and attractive streets.

"It is to be regretted that we have so many narrow streets, when we have so much unoccupied territory. . . . . Wide streets in a town are attended with several very great advantages

to the citizens. They afford a freer circulation and a purer state of the air in the warm season. They operate as a protection against the spread of fires. They give opportunity for planting their borders with trees, which, being in themselves an ornament, and an additional security against the spread of conflagration, afford in summer a comfortable shade to the house which they adorn, and the passengers who walk the streets, and tend to the greater health of the community by their effects on the atmosphere."

His forecast for the future growth in population, however, does not seem quite optimistic enough.

He says, "In a place like Cambridge, which is not only cut up into avenues to the city, but which is besides, composed of several villages so closely united as to form one almost continuous Towne of about five miles in extent and which is constantly thronged, not only with strangers passing through the principal streets from the country to the city, and from the city to the country, but with a busy population of nearly **eight thousand** persons, it is highly important to guard from inconvenient encroachment and impediment of every kind, that portion of the public highway which is appropriated to the use of the many who walk.

"If building and immigration shall continue to increase in Cambridge as they have done for several years past, we are likely in a short time to number a population of **ten thousand souls.**"

MUSEUM STREET.—An unusual case of a steam railroad location being abandoned and afterward utilized as a highway is found in Museum street. In 1848, a small branch line running from the Fitchburg R. R. in Somerville to a terminal on Holmes Place was incorporated as the "Harvard Branch Railroad." It was intended to furnish accommodations for persons connected with Harvard College and those located in the vicinity. The first train was run December 31, 1849. The road proved a financial failure and was sold at auction on July 6, 1855, to William L. Whitney, a Cambridge citizen, for $10,500, and the old station and land on Holmes Place was sold to Harvard College. Some of the remaining land in the old right of way was also taken in by the college. Another section of the old right of way about one thousand feet long, after remaining vacant for some years, gradually became used as a street and was accepted by the city as Museum street in 1902 and 1915.

PUTNAM AVENUE.—What is now called Putnam avenue is a unification of several detached streets.

From Mt. Auburn street to Western avenue, the present location is said to largely coincide with the old "Way to the Little Neck." During the Revolutionary War, a large redoubt was built easterly of and adjacent to this way, which remained visible until a comparatively recent time. In 1840, a street was laid out here by the town and called "Fort street," afterwards called Putnam street.

The portion between Western avenue and River street was laid out in 1865 as "Kent street," and in 1873 the street was extended by the city from River street to Pleasant street as "Walnut street." In 1850, 1847 and 1838, respectively, the following parts were laid out by the various owners, Pleasant street to Magazine street, Magazine street to Pearl street and Pearl street to Waverly street, and in 1873 the entire street was renamed Putnam avenue by the city.

BRATTLE STREET.—As previously stated, a part of what is now Brattle street from Mason street to Elmwood avenue was in use prior to the settlement of Cambridge, forming a part of the original "Waye from Watertown to Charlestown." The portion between Harvard Square and Mason street must have been in use at a very early day, for the Rev. William Brattle's family, for whom the street was named, first located on the street about 1696 and for more than a century the family lived there.

Exactly when this portion of Brattle street was opened for travel is not known, but in 1636 a causeway and foot bridge were ordered constructed across the creek and canal about at the westerly end of Spring street (now a part of Mt. Auburn street), so as to give access to the town spring or shallow well, which was a short distance south of the present line of Brattle street—at or very near the present location of the Social Union building.

Later the road was extended until it joined the old Watertown road at Mason street, where for many years a gate was located. The entire street soon became built up with large and imposing houses, and as many of the owners manifested strong British sympathies during the Revolutionary period, it came to be known as "Tory Row."

The portion of the street from "the North Easterly corner of

Dr. Lowell's garden" (Elmwood avenue) to "Wyeth's Sign Post," being its junction with Mt. Auburn street, was laid out by the county as a county road in September, 1812.

The whole street as laid out was narrow and in places crooked, and in addition the Cambridge Railroad Company had built a track its entire length, running to Watertown.

In 1869 a strong movement was begun to widen and straighten the street and a plan was prepared for the proposed improvement. Great opposition to this widening was developed, Prof. Longfellow, Prof. Lowell, and other influential men strongly opposing it; but in spite of this, the order for the widening was adopted December 14, 1870, making the street sixty feet wide from Harvard Square to Elmwood avenue. One regretable result of this widening was the removal of an old chestnut tree which then stood at the westerly side of Brattle street just north of Story street. This was the "Spreading Chestnut Tree" referred to in Longfellow's poem, "The Village Blacksmith," familiar to every schoolboy.

"Under a spreading chestnut tree
The Village Smithy stands.
The smith, a mighty man was he,
With large and sinewy hands."

The part of Brattle street from Elmwood avenue to Mt. Auburn street, laid out by the county in 1812, forty-nine and one-half feet wide, was widened to sixty feet in 1889.

VASSAL LANE.—This is another street which bears a name common in Cambridge history before the Revolutionary War. It was a way or lane in common use at a very early day and seems then to have been generally called "Highway to Great Swamp." A part of this way or lane is shown on an old and very interesting plan, the earliest one relating to Cambridge found on record, drawn by Abraham Fuller and dated April 14, 1760, recorded Book 167, Page 468, East Cambridge Registry of Deeds. This shows the lane from its present junction with Sparks Street to near Fresh Pond, also a portion of Brattle Street and Sparks Street, all very correct to scale. The lane was laid out by the City and widened to forty feet in 1888.

WENDELL AND MELLEN STREETS.—The tract of land extending from Everett street to beyond Wendell street and from

Massachusetts avenue to beyond Oxford street was originally owned by members of the Brattle family, and the daughter of Gen. William Brattle, Katherine Brattle, lived for many years in a house which stood near Wendell street, fronting on Massachusetts avenue.

She had married in 1752 Mr. John Mico-Wendell and was known during the latter part of her life as "Madam Wendell." Upon the death of her brother, Thomas Brattle, in 1801, the property went to Madam Wendell's two granddaughters, Martha F. Wendell, who married the Rev. John Mellen, and Katherine Wendell, who married the Rev. Caleb Gannett.

When this tract was developed in 1847, and streets and lots were laid out upon it, the family names of Wendell and Mellen were given to the two streets.

Madam Wendell died in 1821 at the advanced age of ninety years.

OXFORD STREET.—Oxford street, from Kirkland street to Everett street, had been laid out about 1840, and by the development of the Wendell property in 1847, it was extended about 800 feet. In 1851 another extension was made and in 1858 Oxford street was laid out to the Somerville line through the Frost estate, thus completing the entire street as it now exists.

MAGAZINE STREET AND CAPTAIN'S ISLAND—The stories of Magazine Street and Captain's Island are somewhat closely connected, and begin with the granting by the town at some time between 1632 and 1637 of the small hillock of upland situated in the salt marsh at about the center of the bend in Charles River immediately above the place where the river widens out, to one Captain Daniel Patrick, a soldier "out of Holland," as the account says, although his name would not indicate it.

He must have been among the first of the settlers to arrive here, for on September 7, 1630, he, with a Mr. Underhill were appointed as "Military Commanders" by the General Court of the Colony, their pay to be partly in money and partly in supplies granted yearly, "their year to begin from the time they begin to keep house." His name appears with seven others in the list of inhabitants at Newtowne in 1632 in the town records, and also as having allotted to him as his share on January 7, 1632, five rods of the common pales, and on August 5, 1633, he was "granted

Akr for cowyardes." He lived while in Cambridge at the southeasterly corner of Boylston and Winthrop streets. He was employed to exercise and drill the militia of the Colony, he having been a "common soldier of the Princes' Guard in Holland." At the latter part of his stay in Cambridge, it is said "he grew very proud and vicious."

He served three months in the Pequot (Indian) war, where he had command of forty men. He seems to have moved in 1637 to Watertown, where he was admitted to the church and served as a selectman in 1638, and later he moved to Stamford, Connecticut, where in a quarrel with a Dutchman in 1643 he was shot with a pistol and killed. Although he owned the land but for a comparatively short time, the name "Captain's Island" has been applied to the little patch of gravellly, barren land ever since.

It finally passed into the hands of Francis Dana, whose heirs on October 27, 1817, sold the lot containing three acres and twenty rods to the Commonwealth of Massachusetts, upon which to erect "a public magazine of powder."

This magazine was completed in September, 1818, and cost about $6500. Peter Tufts, Jr., who owned a large estate nearby, and was a well known surveyor of that time, and had formerly kept the powder house in Charlestown (now Somerville), was made keeper of the magazine. Up to this time Captain's Island and the lands and marshes adjoining had been reached by the old "Way to Captain's Island," skirting the edge of the marsh from near where Pleasant street now is.

On August 24, 1818, the Commonwealth purchased from Edmund Dana and others the rights of way in a street from the "great road" to Captain's Island with the agreement to keep the road open and in good repair.

This road was soon called Magazine street and remained in the care of the state until March 17, 1846, when the Commonwealth agreed to pay the town of Cambridge $300 to repair the road and assume its future care and maintenance "from Main street to the hill a short distance beyond the residence of the late Peter Tufts, Jr., about thirty-eight hundred feet in length, and fifty feet in width."

INMAN STREET.—The land upon which the present City Hall now stands, together with a large tract in the rear, once

formed a part of what was long known as the Ralph Inman Estate. Ralph Inman came from England, and in 1746 bought a large tract of land comprising about 180 acres extending from Massachusetts avenue to Broadway. Upon this estate he built a large, roomy house which stood about opposite the end of Austin street until it was moved away in 1873.

Interesting stories are told of the lavish entertainments given in this house by Mr. and Mrs. Inman prior to the troublous times of the Revolutionary war. Mr. Inman was an ardent Loyalist during the war period and was obliged to leave his home and family for several years, during which, Mrs. Inman was left in charge of his affairs, which she managed with great skill and tact.

A "Committee of Correspondence" of the town took possession of the place for public use, but it was finally returned to Mr. Inman. Gen. Israel Putnam made the house his headquarters during the siege of Boston, when it was called "Barrack No. 1" and accommodated 3460 soldiers.

The following incident of the time was related by Mr. B. F. Jacobs, for many years a resident of Cambridge, as having been told to him by a person who vouched for its accuracy. Upon the easterly corner of the Inman estate, fronting on what is now Massachusetts avenue, there stood for many years a large, old-fashioned, wooden stable. This stable during the first of the Revolutionary War was used for a military hospital. Gen. Washington, visiting this hospital one day, came to a very young soldier who had been shot in the jaw. He was suffering much pain and his head was heavily bandaged.

General Washington kindly enquired how he was getting on. The soldier in a doleful tone said, "Very badly," he "didn't believe he would ever get out again." "Nonsense, my lad," the General cheerfully replied, "you are going to live to kiss the girls yet."

Mr. Inman died in 1788 and in 1792 Mr. Leonard Jarvis bought the property, but sold it to Jonathan L. Austin in 1801, who about 1805 laid out Austin street from the Inman estate to Main street. Just when Inman street was first laid out is not clear, but upon an old map of Cambridge, made by Major Pelham, an English officer in 1775, a way or lane is shown about on the present location of Inman street. A plan drawn by Peter Tufts, Jr., dated 1810, shows a way from Main street to the Middlesex turnpike (Hamp-

shire street), called "Inman's Lane," but another plan dated 1822 shows "Inman's Lane" only as far as Broadway. In 1835 the street was extended through to Hampshire street and called for its entire length, Inman street.

The laying out and construction of these main thoroughfares and streets above described led directly to the cutting up of many of the larger estates by the laying out of streets, and the subdivision of the land into house lots for occupation and sale. The story of all these smaller street developments would be long and not especially interesting. It may be sufficient to say that in fourteen of the larger land developments from the year 1811 to 1873, about eighteen miles of new streets were laid out, with a large number of house lots upon them for occupation.

STREET NAMES

Historic interest is often associated with a street not solely by reason of events which may have transpired upon it, but sometimes because of the name it bears. This seems to be especially true of Cambridge, where many of the streets bear the names of persons or places famed in American history. The following are some of the streets, the origin of whose names is fairly well known.

Eleven streets have been named for Past Presidents of Harvard University.

Dunster St. for Henry Dunster
Willard St. for Samuel Willard
Langdon St. for Samuel Langdon
Quincy St. for Josiah Quincy
Sparks St. for Jared Sparks
Chauncy St. for Charles Chauncy
Holyoke St. for Edward Holyoke
Kirkland St. for John T. Kirkland
Everett St. for Edward Everett
Felton St. for Cornelius C. Felton
Walker St. for James Walker

Six streets were named for members or relatives of the Judge Francis Dana family: Remington street, Kinnaird street, Ellery street, Allston streeet, Trowbridge street, Dana street.

The following were named for the nine prominent counties of the state: Essex street, Hampshire street, Middlesex street, Suffolk street, Plymouth street, Worcester street, Bristol street, Norfolk street, Berkshire street.

The following six street names were made familiar by the War of 1812: Erie street, Niagara street, Lake street, Decatur street, Lawrence street, Perry street.

Between Massachusetts avenue and the Somerville line near the town of Arlington was established during the Civil War a large military camp called "Camp Cameron." There are now five streets there whose names are reminiscent of the Civil War and its Cambridge camp: Cameron street, Seven Pines street, Camp street, Fair Oakes street, Yorktown street.

The following streets bear the names of well known colleges: Harvard street, Wellesley street, Princeton avenue, Vassar street, Amherst street, Tech street.

Some of the governors of the state are remembered in names of the following streets: Ames street, Greenhalge street, Gore street, Fowler street, Endicott street, Danforth street, Hutchinson street.

The following streets have names whose derivation is fairly well known and also the approximate dates of their being laid out as streets by the original owners:

ABERDEEN AVE., for Aberdeen, Scotland, by Alex. McDonald, landowner ..... laid out 1886
AGASSIZ ST., for Prof. Agassiz..... " " 1886
ALLSTON ST., for Washington Allston, painter..... " " 1838 and 1847
APPIAN WAY, named prior to 1837..... " " 1800
APPLETON ST., for John Appleton..... " " 1861
AMORY ST..... " " 1842
ANTRIM ST..... " " 1842
ARLINGTON ST., formerly called "Chapel St." .... " " 1862
AUSTIN ST., for Johnathan L. Austin, landowner.. " " about 1801
AVON ST..... " " 1845
AVON HILL ST., formerly called "Jarvis Court".... " " 1858
BALDWIN ST., for Judge J. F. Baldwin, formerly called "Tremont St."..... " " 1853
BANKS ST., by heirs of Wm. Winthrop..... " " about 1844
BIGELOW ST., for Benjamin Bigelow, early landowner, formerly called Beacon St..... " " 1868
BINNEY ST., for Amos Binney, real estate owner and treasurer of The Proprieters of Canal Bridge.
BEECH ST., until 1848 called "Medford street" .. " " prior to 1775
BENT ST., for Newell Bent, landowner..... " " 1869
BERKELEY ST., for Bishop George Berkeley..... " " 1852
BOARDMAN ST., for Andrew Boardman, early landowner ..... " " 1805
BOND ST., for Prof. George Bond, astronomer..... " " 1842
BOYLSTON ST. From Harvard square to Eliot street first called "Wood street." From Eliot street to the bridge called the "Causie" 1663 et seq. For many years it formed a part of the "Way from Cambridge to Roxbery." In 1838 the street was called "Brighton street." Dec. 1, 1882, the name was changed to Boylston street.

BRATTLE ST., for Brattle family, residents on street from 1696 to 1801. Date of laying out of street from Brattle square to Mason street unknown. Mason street to Elmwood avenue part of Ancient Way to Charlestown. Elmwood avenue to Mt. Auburn street laid out by county in..... Sept., 181-

BREWSTER ST., for John Brewster, financier and landowner ..... laid out 1887

BRIDGE ST., by Lechmere Point Corporation as an approach to Canal Bridge..... " " 1809

BROADWAY, originally a part of the Cambridge and Concord turnpike, first called "Concord St."... " " 1805

BROOKLINE ST., Mass. avenue to Auburn street, called "Canal St." Auburn street to bridge laid out in 1851 and called Brookline street in 1852 " " about 182-

CAMBRIDGE ST., from Canal bridge at Charles river, now Bridge street, to near Elm street, laid out by Lechmere Point Corporation as Cambridge street prior to 1809. From Elm street westerly to Broadway, called "Foxcroft street," for John Foxcroft, landowner; and sometimes called" Craigie street" for Andrew Craigie..... " " 1835 to 1848
Name established as Cambridge St. its entire length by city of Cambridge..... Sept. 26, 1848

CHAUNCY ST., for Chas. Chauncy, President of H. U.

CHURCH ST., for First Parish Church, formerly called "Hancock St.," for Torrey Hancock

CLARK ST., for Charles Clark, landowner ..... laid out 1840

COOLIDGE AVE., for Josiah Coolidge, landowner.. " " about 1850

CONCORD AVE., laid out as a turnpike road in 1803, called Concord turnpike. In 1829 taken by the county. In 1846 it became a city street

CRAIGIE ST., for Andrew Craigie, landowner..... " " " 1851

DANA ST., for Dana family, landowners..... " " 1835

DAVIS ST., for Mason Davis, landowner, called "Mason St." until 1840..... " " about 1805

DUNSTER ST., for Henry Dunster, President of Harvard University 1640

ELLERY ST., for Elizabeth Ellery, wife Edmund Dana " " 1838

FARWELL PLACE, for Levi Farwell, formerly called "School Ct.," name changed in 1872 to Farwell Pl. " " 1830 to 1837

FAYERWEATHER ST., for Thomas Fayerweather. landowner ..... " " 1851

FAYETTE ST..... " " 1842

FOLLEN ST., for Rev. Charles Follen, originally called "Follen Place"

GARDEN ST., an ancient way. Until 1848 easterly end called "Washington St., name changed to Garden St. for the Botanic Gardens started in 1805

GORE ST., for Christopher Gore, Governor of Massachusetts 1809 and 1810..... " " 1811

HAMPSHIRE ST., a part of the "Middlesex Turnpike" chartered in 1805. A "county road" from 1842 to 1846. When Cambridge was made a city it became a city street.

HARVARD ST., for Harvard College. From Main St. to near Windsor St., called "Canal St.," laid out about 1804. From the parsonage at Harvard Sq. to near Windsor St., as Harvard St., by the town " " 1808

HAYWARD ST., for James Hayward, early surveyor " " 1902

HILLIARD ST., for William Hilliard..... " " 1852

HOLMES PLACE, for Rev. Abiel Holmes

HOLYOKE ST., for Rev. Edward Holyoke, President of Harvard University, first called "Crooked Street" " " 1632

HUBBARD PARK ROAD, for Gardiner G. Hubbard, landowner ..... " " 1907

INMAN ST., for Ralph Inman, early landowner. Mass. Ave. to Broadway called "Inman's Lane" in 1810, later called "Grove St." Extended to Hampshire St. in 1835, and called Inman St. its entire length

JARVIS ST., for Nathaniel Jarvis, landowner..... " " 1861

KINNAIRD ST., for Lord Kinnaird, England, married one of the Dana family..... " " 1852

KIRKLAND ST., for John T. Kirkland, President of Harvard University, called "Washington St." until 1830, sometimes called "Professors' Row." A travelled way to Charlestown prior to 1631.

LEE ST., for Nathaniel C. Lee, landowner..... " " 1809

LINNÆAN ST., for botanist Linnæus, formerly called "Love Lane"..... " " 1724

MAGAZINE ST., for State Powder Magazine at Captain's Island..... " " 1818

MAIN ST., originally laid out and constructed as a causeway forming an approach to West Boston bridge in 1793. Laid out as a part of Main St. by the city in 1855.

MASON ST., a part of the "Way from Watertown to Charlestown" in 1631.

MASSACHUSETTS AVE., Harvard Bridge to Lafayette Sq. Laid out by the city in 1889, called for a time "Front St. Extension". includes part of a street then called Front street.

Lafayette Sq. to Quincy Sq. First called "Way to Pelham's Island"; later called "Road from Colleges to West Boston bridge"; still later called a part of "Main street."

Quincy Sq. to Harvard Sq. First called "Braintree St.," later a part of Harvard street.

Harvard Sq. to Arlington line. First called "Road to Menotomy," later called "North Ave."

From 1805 to 1842 the portion from Porter Sq. to Arlington line was a part of the "Middlesex turnpike."

Entire street named Massachusetts avenue March 30, 1894.

MELLEN ST., for Rev. John Mellen, whose wife was a Wendell, by whom the Wendell St. and Mellen St. tract was ..... laid out 1847

MERCER CIRCLE, for Gertrude (Mercer) Hubbard (Mrs. Gardiner G. Hubbard)..... " " 1884

MT. AUBURN ST., Elmwood Ave., to the Watertown line, a part of the "Way from Watertown to Charlestown" in 1631
Elmwood Ave. to Brattle Sq. laid out by the town and called "Lower road to Mt. Auburn" in 1808
Brattle Sq. to Holyoke St., one of the first streets laid out by the town and called "Spring St." about 1632
Holyoke St. to Putnam Sq. laid out by the town September 6, 1808.

MUNROE ST., for Edmund Munroe, landowner, one of the incorporators of the East Cambridge Land Co. laid out 1869

MUSEUM ST., for Agassiz Museum, formerly a part of the Harvard Branch Railroad location ..... " " about 1855

OTIS ST., for Harrison Gray Otis, shareholder in Lechmere Point Corporation ..... " " 1811

OXFORD ST., from Kirkland St. to near Jarvis St... " " prior to 1847
From Jarvis St. to city line, by various estates.. " " 1847 to 1861

PALMER ST., for Stephen Palmer, landowner..... " " 1847

PEARL ST., Mass. Ave. to Auburn St. laid out in 1822 and called "Inn St." Shown on plan of 1824 without name entire length.

PHILLIPS PLACE, for Willard Phillips (?)..... " " 1851

PLYMPTON ST., for Dr. Sylvanus Plympton..... " " 1803

POTTER ST., for Henry Potter, one of the incorporators of the East Cambridge Land Co..... " " 1869

PRESCOTT ST., for Col. Prescott, formerly called Charles St..... " " 1834

PROSPECT ST., laid out in 1804 as a county road leading to Prospect Hill, Somerville, called Prospect St. in 1822

PUTNAM AVE., Mt. Auburn St. to Western Ave., called Fort St. in 1842. Western Ave. to River St. called Kent St. in 1865. River St. to Pleasant St., laid out by city as Walnut St..... 1873
Pleasant St. to Magazine St., laid out as Walnut St. 1850
Magazine St. to Pearl St., laid out as Walnut St.. 1847
Pearl St. to Waverly St., laid out as Walnut St... 1830
Entire street named Putnam Ave. for Major-General Israel Putnam..... 1873

REMINGTON ST., for Judge Jonathan Remington.. laid out 1844

RIEDESEL AVE., for Madam Riedesel, wife of Gen. Riedesel, English prisoner of war..... " " 1890

RINDGE AVE., for Frederick H. Rindge, formerly called "Kidders Lane" and later called Spruce St. " " about 1847

RIVER ST., laid and constructed by private corporation and opened for travel.....Dec. 11, 1810
Taken over by town in 1832, first called "Brighton St.," name changed to River St. Sept. 26, 1848

ROGERS ST., for William Sanford Rogers, merchant of Boston, shareholder in Lechmere Point Corporation and East Cambridge Land Co..... " " " 186?

SHEPARD ST., for Rev. Thomas Shepard, first called Avon St., called Shepard St. in..... 1858

SIDNEY ST., for Sidney Willard..... " " 1838

SODEN ST., for Thomas Soden..... ..... " " 1833

STORY ST., for Judge Story, 1829 to 1845... ..... " " 1865

THIRD ST., Bridge St. to south of Charles St., laid out in 1811, south of Charles St. laid out by county and called "Court Street" in..... 1832
THORNDIKE ST., for Israel Thorndike, shareholder in Lechmere Point Corporation..... " " 1811
TRAILL ST., maiden name of grandmother of James R. Lowell..... " " 1892
TROWBRIDGE ST., for Judge Edmund Trowbridge.. " " 1838
VASSAL LANE, for Vassal family, long residents in the vicinity, an ancient "Highway to Fresh Pond"
WADSWORTH ST., for Alexander Wadsworth, early surveyor..... " " 1902
WARE ST., for Rev. Henry Ware..... " " 1834
WASHINGTON ST., Norfolk St. to Moore St..... " " about 1824
Moore St. to Main St..... " " " 1840
WATERHOUSE ST., for Dr. Benjamin Waterhouse, about 1800..... " " 1724
WEBSTER AVE., first called Medford St., named Webster avenue in..... 1856
WENDELL ST., for Mrs. Katherine (Brattle) Wendell, daughter of Gen. William Brattle, called "Madam Wendell"..... " " 1847
WESTERN AVE., laid out and constructed by corporation in 1824-5. First called "Watertown Road." Taken by city Dec. 22, 1855, and called Western Ave.
WILLARD ST., for Joseph Willard, President of Harvard University, originally called "Liberty St.". " " 1843
WINDSOR ST., laid out by Andrew Boardman in.... 1801
WINTHROP ST., for Professor John Winthrop, formerly called "Long St."..... " " about 1632

NECROLOGICAL

It seems fitting that some mention should be made in this place of those men who, as engineers and surveyors, were instrumental in planning and laying out what has developed into quite a complete system of metropolitan streets, and who so have performed an important public service in promoting a better civic and social life in this community. It is to be regretted that the information concerning the life and work of these men is so meagre, but the following are such facts as it has been possible to obtain regarding some of them.

DAVID FISKE seems to have been the first man who was designated as a "surveyor" in the early town records. Mr. Fiske came from Watertown in 1646 and bought a lot of land then facing on the common, now Linnæan street, near Garden street. His trade was that of wheelwright, and he seems to have combined that with public work and surveying. His early experience in Cambridge proved to have been a little unfortunate, for on September 4, 1646, the year of his arrival, it

was ordered "David Fiske, for two hogs taken contrary to ye Town orderes is fined 8 p-"!

He frequently acted for the town in the capacity of surveyor and as a kind of referee for many years. In 1683, it is recorded that in a matter of a division of land near Concord, shown on a plot drawn by Ensign David Fiske, it was "ordered that Ensign Fiske is chosen surveyor and it is left to him, Samuel Champne, and Samuel Stone, Sr., and John Watson, or any two of them, whereof the surveyor is to be one: First, to state and settle all county roads that ly through the land of the width the law directs, and then to lay out highways from the farms already settled in the common unto this Town, of two rods wide between the divisions where need requires a highway." Mr. Fiske moved to the "Farms" (now Lexington) about 1660 and died there in February, 1710-11, aged eighty-seven years.

SAMUEL DANFORTH. The oldest plan of land in Cambridge found recorded at the Registry of Deeds, East Cambridge, was drawn by Samuel Danforth, Surveyor, dated March 27, 1739, and showed certain lands owned by Daniel Champney.

ABRAHAM FULLER. Another interesting old plan recorded in East Cambridge, dated April 14, 1760, shows a large tract of land on Brattle street between Sparks street and Fayerweather street, belonging at that time to Lee, Marrett, and Thatcher, drawn by Abraham Fuller.

SAMUEL THOMPSON was born October 30, 1731, and died August 17, 1820. He lived in Woburn, where he was a well known surveyor. He was an ardent patriot in the Revolution and fought in the American Army. In compliance with the Resolve of the Legislature of June 26, 1794, already referred to, the Town of Cambridge engaged Mr. Thompson to make the required surveys and a map of the Town, which was dated April, 1795 (which is here reproduced). This map is of interest, as it is the first official plan of the Town known to be drawn from actual surveys.

OSGOOD CARLETON, "teacher of Mathematics," as he styles himself, began the practice of surveying in the latter part of the eighteenth century, and a considerable number of early maps and plans of his relating to Cambridge are in existence, notably a

plan of the causeway to the West Boston bridge made in 1792, showing the lines and areas of land taken for the causeway.

PETER TUFTS, JR., born in December, 1774, was a well known early surveyor who made a great many plans of estates and streets in Cambridge and adjoining towns. He was born and lived in that part of Charlestown now called Somerville, where he was the keeper of a powder magazine. He moved to Cambridge and became the keeper of the powder magazine at Captain's Island about 1818. He lived for several years on Magazine street near the street now called "Tufts street," which was laid out on land formerly held by him. His map of the Cambridgeport Parish, 1824, shows his estate with buildings, yards, duck ponds, etc., in detail. Many of his plans were embellished with a large, brilliantly colored compass point. Paige records the fact that Peter Tufts, Sr., was a contributor of 14 pounds 25 shillings to the enlargement of the Meeting House in Harvard Sq. about 1756, and that Peter Tufts, Jr., and thirty-three others were incorporated in 1822 as the "First Universalist Church in Cambridge." He died in 1825.

ALEXANDER WADSWORTH was born in Maine in 1806, came to Boston in 1825, and soon opened an office of his own, boarding at the "Bunch of Grapes" Tavern, the meeting place, it may be remembered, of the Proprietors of the West Boston bridge for many years.

Mr. Wadsworth prepared the plans by which Mt. Auburn cemetery was laid out, also Salem cemetery and Pemberton Sq. in Boston. Of the many plans drawn by Mr. Wadsworth on record, a large proportion of them are of Cambridge properties, many of them being of the large estates, such as the Dana estate, Craigie estate, Fayerweather estate, and others. Mr. Wadsworth was active during his long life until extreme old age at his chosen work. He was a prominent member for years of the old "West Church" in Boston. He died in 1898 at the age of ninety-two years.

STEPHEN P. FULLER made many plans of the Lechmere Point Corporation and adjacent properties in the period from 1822 to 1865.

WILLIAM A. MASON was born in 1815 and began to practice surveying in Cambridge in 1840, and the firm of W. A. Mason & Son still continues to carry on the work. Mr. Mason made many surveys for street development and real estate sale in Cambridge and its immediate vicinity. He died in 1882.

The following are names of men who have done important work along the same lines, but of whom but little is now known.

JAMES HAYWARD, plans date from about 1833 to 1837, and include a plan and report on the streets of the city, dated Jan. 15, 1838, relating principally to encroachments of fences, etc., on sidewalks, etc.

WALDO HIGGINSON AND SAMUEL HOLT, plans date from about 1842 to 1845.

WALTER M. WILSON, plans date from about 1845 to 1875.

JOHN LOW, plans date from about 1845.

WHITWELL AND HENCK, plans date about 1851.

JOHN M. BATCHELDER, plans date from about 1863 to 1904.

SHEDD AND EDSON, plans date from about 1859 to 1879.

ANDREW CRAIGIE occupied a conspicuous place in the town's history from 1790 till his death in 1819, and while he made numerous enemies and was not always over-scrupulous as to the ethics of many of his transactions, yet his activity and shrewdness in carrying out his numerous schemes, many of which eventually proved of great public benefit, makes the story of his life of more than common interest. Little is known of his early life, but Sept. 5, 1777, he was appointed apothecary-general of the Northern Department of the Revolutionary army, from which his title of "Doctor" was derived. He was said to have made large sums from the purchase of supplies under his commission, also as a banker and speculator in this vicinity and also in Philadelphia. January 1,

1792, he purchased the old John Vassall House on Brattle street, which, during the Revolutionary War, had been used as Washington's headquarters, and at once made additions and elaborate repairs to the estate, which he enlarged, by purchases in the vicinity, to about one hundred fifty acres.

Of the many improvements which he had made on the estate, the two which impressed the townsmen most seem to have been the ice house by which he could have ice in summer, and the hot house by which he could grow flowers in the winter. It appeared to many like defying Providence by thus perverting nature! For some years Mr. Craigie lived here in princely style, entertaining his friends and relatives in generous manner. It is said that he at this time employed twelve servants. Toward the latter part of his life, his ventures proved not successful and he gradually became more and more involved in debt until, toward the last, fearing arrest, he dared not venture out except on Sunday. He died suddenly of apoplexy September 18, 1819, leaving his widow in straightened circumstances.

He was the principal mover in many public improvements, the most important being the construction of the Canal (or, as commonly called, "Craigie's) Bridge," completed in 1809. In connection with this was the laying out and development of the Lechmere Point (now called East Cambridge) section, which covered an area of over three hundred acres extending about to Inman Sq. and including the important avenues of Cambridge street and Bridge street. In this connection also, the County Court House (civil and probate) and the jail—after a considerable controversy—were located at East Cambridge in 1816, the land (including the buildings costing $28,190.78) being given by the corporation. He was also active in the laying out of a portion of Mt. Auburn street between Elmwood avenue and Brattle Sq. as already described, and also the laying out of Brattle street from Elmwood avenue to "Wyeths Sign Post" at its junction with Mt. Auburn street.

That his activities and methods did not always meet with the approval of his fellow townsmen is shown by the order for his prosecution for interfering in the laying out of the portion of Mt. Auburn street already referred to, and still further in the controversy arising from the laying out of Cambridge street by the references made to him in the report of a committee of the town ap-

pointed to oppose a petition dated June 6, 1809, addressed to the General Court, and signed by a Mr. Thomas H. Perkins and fifty-two others, requesting the appointment of a committee from that body "to explore, view, and mark out new highways from the westerly end of said bridge (Canal Bridge) to communicate with the great roads into the country, in such places as will best comport with common convenience and the public good."

The committee appointed by the town, Hon. Francis Dana, chairman, made a very vigorous remonstrance against this petition, stating that "the inhabitants of Cambridge and Cambridgeport are deeply afflicted by the incessant machinations and intrigues of Mr. Andrew Craigie in regard to roads," alleging that at the last session of the General Court, Mr. Craigie had caused to be presented the petition for the appointment of a committee with extraordinary powers as to laying out roads in Cambridge, and that while they seemed to come from disinterested persons, some of the signers were proprietors of the Canal Bridge or were owners of lands connected with the proposed roads, and that while Mr. Craigie's name did not appear on the petition, he nevertheless appeared at the hearings with two lawyers in support of the petition, while the petitioners themselves were absent, this being "a continuation of a plan by him and his coadjutors commenced in 1797 and invariably pursued to 1809 to turn the travel in that quarter, and the same game he is evidently now playing by the petition signed by T. H. Perkins and others."

The committee to whom this matter was referred reported that "it is inexpedient for the legislature to appoint any committee to view or mark out any of the highways aforesaid."

CONCLUSION

We have now traced with some detail the origin and history of many of the more important streets of Cambridge as they have been developed through a period of nearly three hundred years.

Beginning with the original "Way from Watertown to Charlestown," which could have been only slightly better than a cart path, and the eight little village streets of the original settlement of 1631, additional ways of travel were added as the needs of the community required until at the time of the first survey in 1794, there were about 12 miles of public ways. In 1830, at the time of the second

survey, there were about 38 miles of ways in use. In 1846, when Cambridge was incorporated as a city, there were about 51 miles of roads in use. In 1875, there were 76 miles of city streets in use, and in 1918 there were 735 streets of all classes, having a total length of 125.2 miles. Meanwhile, the population and the material interests of the community had grown in corresponding proportion —very slowly at first and then with a constantly increasing ratio until at the present time our city stands high in those things which make for the best in modern civic life.

It may be of interest to look for a moment at the present street system of our city as representing the consumation of these long years of growth and development.

It is generally held by modern experts in street and city planning that the most efficient plan of the streets of a metropolitan district is one in which the larger centers of business, educational and civic interests are directly connected with each other by broad, straight thoroughfares, while the local and residential interests of neighborhoods and communities are served by systems of smaller or secondary streets and ways connecting with the main thoroughfares which form the trunk lines of travel and communication.

An examination of a modern map of Cambridge and its surroundings will show that while for a city of its size the railroad facilities for passenger traffic and accommodation are unusually poor, the system of streets as they now exist is admirably adapted to its requirements, while its civic centers are connected by broad and conveniently located highways with each other and with the spacious avenues of approach from Boston and adjacent municipalities.

Upon these main avenues are located the major part of the electric surface car lines, while the subway from Harvard square to Boston is, in Cambridge, located below the surface on the original location of the old horse-car line, first operated in 1856. An admirable system of secondary streets lead into and connect with those main avenues, furnishing ample facilities for the local traffic.

For the excellence of this street plan, the city owes much to the foresight and broadmindedness of the men of the earlier time who, in the days of small things, provided so generously for the needs of the generations yet to come.

The streets of Cambridge certainly have a great historic and sentimental value because of their association with the lives and

deeds of the great men who have lived upon them, and whose honored names many of them bear; but their greatest value lies in the fact that they have been an important factor in the progress of this community toward a higher civilization and a better civic and social life.

"Roadways are at once the agents and the index of the culture to which a commonwealth has attained."—Report *"Highways of Massachusetts,"* 1893.)

The following is a list of maps and plans of Cambridge having historic interest, which have been examined in preparing the foregoing paper:

MAPS AND PLANS OF CAMBRIDGE

AT CITY ENGINEER'S OFFICE, CITY HALL, CAMBRIDGE

Date of Map	Description	Maker	Filing Number
1759	Small scale map of Cambridge, Charlestown and Watertown, photo copy.		A-284
1777	Military map Boston and vicinity, lithograph	Major Henry Pelham	144
1795	Official map ordered by legislature, photo copy	Sam. Thompson	A-284
1807	Boston and vicinity showing fortifications, in "Life of George Washington," copy	John Marshall	6246
1810	Cambridge E. of Harvard Sq., with parts of Somerville, Charlestown, and Boston	Peter Tufts, Jr.	5216
1813	Cambridge W. of Harvard Sq., original parchment	" " "	411
1824	Cambridge E. of Harvard Sq	" " "	M-25
1824	" " " " " tracing of above	" " "	5082
1830	Official map ordered by legislature, photo copy	John G. Hales	A-284
1833	"Plan of Village in Old Cambridge," copy	Alex. Wadsworth	408
1837	Street map as ordered by the town, original	Jas. Hayward	5081
1838	" " " " " " " lithograph	" "	MV-31 and 5000
1854	Map of Cambridge, sale lithograph	H. F. Wälling	A-160
1858	Map of Boston and vicinity, sale lithograph	" " "	M-21
1865	Map of Cambridge, lithograph	J. G. Chase	46
1853—1900	Maps of Cambridge, taken from sundry city directories, lith		5000
1880	Map of Cambridge as of about 1635, lithograph, compiled by	C. D. Eliot	2000
1906	Vicinity of Harvard Sq. compiled and drawn from ancient data by	Geo. Lamb	6246
1918	Plans of Cambridge Common from surveys made in 1782, 1784, 1798, copies		6142
	AT WIDENER LIBRARY, HARVARD UNIVERSITY		
1782	Plan of Cambridge Common, original, from surveys by	E. H. Williams	105-26
1784	Same as above, from surveys by	J. Green	105-26
1798	" " " " " "	S. D. Parker	105-26
1777	Military map of Boston and vicinity, original	Major Henry Pelham	M-3355-12
1826	Plan of Boston and parts of Charlestown and Cambridgeport, actual surveys	S. P. Fuller	MR-3360-4; 5
1801	Cambridge as of 1635, manuscript map		M-3450, 5
1833	Boston and vicinity, showing Boston, Cambridge, Watertown, Brighton, and Roxbury, small scale	J. G. Hales	M-3360, 4, 2
	AT ARCHIVES DEPARTMENT, STATE HOUSE, BOSTON		
1759	Plan showing portions of Charlestown and Watertown for petition to be set off to first parish, Cambridge, original		3d series, Vol. 37-p. 22
1795	Town plan, original	Sam. Thompson	Vol. 9-p. 5
1830	Town plan, original	John G. Hales	Vol. 2-p. 23
1830	Plan of center of Cambridge, college grounds, etc		3d series, Vol. 46-p. 3

REPORT OF THE PLANNING BOARD

MEMBERSHIP

Ex-officio Member

HIS HONOR THE MAYOR

Citizen Members

	Term expires
William F. Harris, Chairman . .	May, 1923
Robert E. Martin, Vice-chairman .	May, 1920
James J. Hill	May, 1919
Walter F. Earle	May, 1922
Benjamin Roseman	May, 1921

During the Great War the Planning Board issued no printed reports, as most of the activities of its members were directed to immediate war work, and its consultant was in Washington.

During 1917 the Board directed its attention, among other things, to the mosquito nuisance, and in conjunction with the Sanitary Commission submitted the following report:

June 26, 1917.

To His Honor, the Mayor of Cambridge; the Cambridge Board of Health; The Cambridge Committee on Public Safety; and the Cambridge Branches of the Red Cross

Gentlemen: We recommend that Cambridge abate the mosquito nuisance. This can be done by the expenditure of a comparatively small amount of money annually, but it requires constant vigilant effort on the part of city officials and hearty co-operation of the citizens. It is fully within the power of the City of Cambridge to accomplish this result.

Always a nuisance, the mosquito bids fair this year to be a greater nuisance than ever. It will interfere to a large degree with the thorough-going cultivation of many of the acres of back yard gardens and bring serious discomfort and even danger to the student body of soldiers training in our midst. It may therefore be very properly regarded as a war measure. It has an equal permanent value in peace

times, not only in relation to gardening but also in making enjoyable on hot summer evenings our parks, and in fact, every bit of open space where people may be out of doors. It would be an important factor in inducing people to live here in summer. In short, mosquito abatement is necessary to make out-door Cambridge livable for the great majority of our citizens who must stay in the city during the season from June to September.

Mosquitoes breed in standing water and require from eight to twelve days before they emerge into the air. Few fresh-water mosquitoes travel far from their point of origin. It is, therefore, only necessary to cut them off from all water surfaces to practically eliminate them. This is accomplished by doing away with the water, by preventing access to it by screening, and by oiling its surface, which effectually kills the young mosquitoes by shutting off their air-supply.

The chief water surfaces in the city are catch-basins in the streets, tanks, barrels and pails of water on and around buildings, ponds and swamps on the outskirts of the city and casual occurrences such as tin cans filled by showers, fountains, defective gutters, and even, in very rainy seasons, water standing in back yards for a week or more.

Each of these has its particular method of attack. Catch-basins should be oiled regularly every ten days or two weeks. Oil running off from the streets is not dependable, and it is necessary to pour into the basins and their traps about one-half pint of light fuel oil, which costs at present nine cents per gallon in car-load lots. A checking system must be adopted of making a chalk-mark on each catch-basin and near any pools of water that are included, and keeping a card catalog of these. Then an inspector must go over the route one or two days after oiling and remark every spot, so as to guard against omissions. A single laborer neglecting his work can make the whole system ineffective.

Tanks and barrels may be oiled or screened with mosquito netting. Property owners should be required to co-operate also in eliminating all sources of casual water, by destroying cans, mending gutters and filling depressions. Where this is impractical the first year, oiling should be resorted to. One-half pint of oil and kerosene every ten to fourteen days will cover ten square feet of surface and may be applied with a garden watering pot.

Mosquito prevention work is simple, but must be thorough to be effective. We recommend a special appropriation this year of $5,000

to be expended by the Superintendent of Parks, the City Engineer, the Superintendent of Streets, or other qualified official in suppressing mosquitoes. This amount may be increased or decreased in subsequent years as experience dictates.

A special force under a competent foreman should start at the center of the city and gradually enlarge the district freed of mosquitoes until the entire city is covered, with the possible exception for the present of the uninhabited swamp area in the extreme western part.

Ultimately all of the swamps surrounding the city must be drained and ponds deepened along the shores so that fish may feed on the young mosquitoes. To this end we recommend that property owners be given a certain time to eliminate all shallow standing water on their lands as harboring a nuisance. The city should drain any wet lands in its possession, and we strongly recommend that action by the Metropolitan Park Commission be secured in filling the low places and ditches in the meadows along the upper portion of the Charles River and in the Fresh Pond marshes.

We further recommend that publicity be given the mosquito campaign by posters and newspaper articles, and the co-operation of all citizens be enlisted in the work of suppression. This should further be ensured by an ordinance or Board of Health regulation declaring mosquitoes a nuisance and requiring property owners to abate all standing water where they may breed. The inspector of catch-basins can at the same time investigate complaints and inspect property suspected of harboring breeding places large or small.

By such measures Brookline and Newton, Massachusetts; Savannah, Georgia; Providence, Rhode Island; many places in New Jersey and other states; and notably the Panama Canal Zone have effectively eliminated the mosquito. We urge that Cambridge do likewise. The first step is an appropriation to permit the oiling of catch-basins, and inspections this year; and the planning of a more extensive campaign for next year. The result will add to the comfort of every citizen in Cambridge, will prove a useful advertisement for the city, and will increase the value of real estate many times what it will cost.

Respectfully submitted,

WILLIAM F. HARRIS, *Chairman.*
ARTHUR C. COMEY, *Secretary*
For the Planning Board.

GEORGE C. WHIPPLE,
For the Cambridge Sanitary Commission.

It was deemed too late to act on this report in 1917, but the next year the Board again pushed the matter and gained the co-operation of many citizens. A hearing was held before the city council and a beginning was made towards real suppression. In 1919 the nuisance was effectively combatted, with the result that Cambridge was never so free from mosquitoes. The work should be continued each year, for it has been demonstrated that success can be attained. Further improvement in mosquito elimination is possible when adjacent cities and towns also take as effective measures against the pest as Cambridge and Brookline now do.

In 1918 the chairman submitted reports on the use of Charles River and Harvard Square conditions, and in June, 1919, a letter relative to Peabody street, as follows:

To His Honor, the Mayor, of Cambridge, to the Honorable City Council, and the Park Commissioners

Gentlemen: Few cities possess a more extended river front than does Cambridge. The Charles is in parts beautiful, and in the heated summer season the banks are generally by far the coolest place within easy reach. Yet the people generally get very small enjoyment from the opportunities offered us by Nature. The Planning Board suggests that a serious study be made by the city, with the object of making accessible to our people the possibilities which lie at our doors.

To begin the discussion, the Board points out that we go many miles to enjoy boating on the river in other places. The city should make some provision so that boats and canoes may be hired at reasonable prices. The simplest scheme would be to offer to lease to responsible persons a portion of the park lands on the river for the erection of a boat house or landing. This should be at some point or points easily accessible to the trolleys, so that people from all parts of the city may enjoy the privilege. To this could easily be added an open-air theatre, a dancing pavilion, and a refreshment establishment where all could enjoy in the coolness of hot evenings the particular form of pleasure each enjoys most. The bathing facilities could well be extended.

The river is easily policed. A spot or spots should be chosen where least annoyance would be caused to permanent residents, and a large amount of innocent pleasure procured to great numbers at small expense in the heat of the summer.

This suggestion is appropriate at the present time when the city is on the way to free itself from the pest of the mosquito. With the co-operation of the Metropolitan Park Commission and the citizens, life on the river will be comfortable as it has not been in the past. The Planning Board suggests to His Honor, the Mayor, to the Honorable City Council, and to the Park Commissioners that early measures be taken to use the advantages of the river.

W. F. HARRIS, *Chairman.*

Many citizens are engaged on the present problems of Harvard Square. In the main, two important facts have greatly changed conditions there in recent years: the square has ceased to be the trading centre it was before the subway took traffic underground, and since Harvard College has become a great democratic institution lavish expenditure on the part of students has ceased to prevail. As a result, the profits of the merchants and consequently the prospects of taxation are in the balance.

The Planning Board considers that a great amount of trade now lost to Cambridge could be brought back by a series of shops in the Harvard Square subway. With the remodeling of College House, or the erection of an entirely new building, this could easily be managed with slight engineering difficulties. The Board does not intend to discuss details, each as whether the same dealers should have shops both above and below ground, and conditions of arranging for fares; but presents the general principle that shops dealing with some of the main essentials of life would be a great convenience to the thousands of passengers who transfer at Harvard Square. Not only could the passengers hurrying to or from Boston make purchases with the minimum of time wasted, but the convenience in stormy weather would be great. Many finding the square an advantageous place in which to deal in time of stress would become permanent customers, both below and above ground.

There are other great advantages that could be accomplished in the alterations that would ensue. The present unsightly, inconvenient, and extremely dangerous Kiosk now in the centre of traffic could be eliminated and incorporated in any new building which shall replace College House. This new building is closely connected with any project for Harvard Square. If a theatre is to be built there, the latter should be entered from the subway as well as above ground; the theatre should be on the ample ground behind College House and

should not encroach on land most valuable for business purposes. Ample provisions for a post office should be arranged with the national government, so that the office should stay in the same place for many years. Nothing is so upsetting to stable valuations as a transitory post office. Subject first to the convenience of the greatest number of users, the office should be in the spot where it will most permanently stabilize values and least encroach on business. It is legitimate for the city to use its entire influence to produce such a result. The post office located in the rear of College House should surely have facilities for the recepiton of mail and sale of stamps in the subway.

While the Board suggests only a beginning of increase of facilities for attracting new trade to a set of underground shops at Harvard Square, open to the enormous number of daily passengers, it sees possibilities of a great extension of the idea, which is especially favored by the conditions of the land between the square and Brattle Street. A large arcade for shops, a central market, and many other enterprises would surely follow if success attended the pioneers. The convenience of the public and increased taxation values would inevitably ensue.

W. F. HARRIS, *Chairman*

June, 1919.

Your Honor: Mr. Walter F. Earle, a member of this Board, has called attention to the following condition of traffic:

"Bordering the Flagstaff Park, on the west side of Peabody Street, the space between the sidewalk curb and the car track is so narrow that there is a constant menace to traffic. It is particularly dangerous near the point where the track curves into Cambridge Street. I have seen damaged automobiles lying helpless just here, that have been caught between the curb and the rear of a trolley car when it swings wide on going around this curve.

"The condition can be corrected by a relocation of the track, or by making the sidewalk just here narrower, or indeed by abandoning it entirely, for the sidewalk here is used very little."

The Board calls the matter to your notice with unanimous approval of Mr. Earle's suggestions.

With great respect,

Very truly yours,

W. F. HARRIS, *Chairman.*

In 1917 and early in 1918 considerable work was done under the Planning Board's direction on the districting or zoning scheme. As, however, it appeared that a constitutional amendment would be necessary before zoning according to use could be put into effect, work was suspended, but was resumed early in 1920, when it appeared likely that authority would soon be granted. The Planning Board's report on zoning for Cambridge is appended hereto.

Early in 1920 the Planning Board directed its attention to two additional problems; Harvard Square traffic conditions, report on which was submitted to His Honor, the Mayor, and City Council, March 5th, this being a live issue at the time; and, second, to the feasibility of municipal golf at Fresh Pond. Both of these reports are also appended hereto.

During the coming years the Planning Board proposes to bring together all its recommendations so far as they affect the physical plan of the city, to bring these up to date, to piece them out with studies of phases of city planning not hitherto considered, and to present the whole as a *comprehensive city plan* for Cambridge, the task for which the Board was originally created, under Chapter 494 of the Acts of 1913.

Among other important problems, many of which cannot be foreseen at this time, the board proposes to continue its studies of Cambridge transit facilities with a view to presenting a definite program for their progressive development as need arises.

Respectfully submitted,

CAMBRIDGE PLANNING BOARD,
WILLIAM FENWICK HARRIS,
Chairman,
ROBERT E. MARTIN,
Vice-Chairman,
WALTER F. EARLE,
BENJAMIN ROSEMAN.

GOLF AT FRESH POND

REPORT TO THE CAMBRIDGE PLANNING BOARD

By Arthur C. Comey,

City Planner, March 19th, 1920

I. FEASIBILITY

The desirability of municipal golf courses as part of the recreation facilities of a city is now unquestioned, but their establishment is not always feasible, chiefly on account of the relatively large area required, about one hundred acres for an eighteen-hole course. A nine-hole course soon becomes so crowded that it is not considered practical for municipal golf. However, the citizen seeking to play golf will go far for it; and therefore outlying areas of relatively low value and but little sought for other recreational purposes are suitable.

Around Fresh Pond a park is now maintained by the Cambridge Water Board, largely to insure freedom from pollution of this distributing reservoir. On the southeast side of the pond it is contiguous to a large and growing community that is using this part of the park more and more for recreation. On the north and west, however, there is at present only a very sparse population, and this is not likely to increase much, at least within the city limits. The total area of this section of the park, between the eastern Concord Avenue entrance and Fountain Terrace, is about one hundred and thirty-five acres, of which some six acres are comprised by two small ponds. However, of the remaining land area, about four acres consist of steep wooded slopes not adapted to golf, eighteen acres are included in the heavy boundary plantings made several years ago and now too well grown to warrant much disturbance, and thirteen acres are taken up by roads and paths already constructed, including in each calculation an additional ten-foot strip outside the road or path. Finally six acres are more or less covered by trees and shrubs existing before the plantings were made, leaving about eighty-eight acres net playing area.

After Fresh Pond had been converted into a reservoir, and a good deal of grading had been done, the park was completely laid out by the Olmsteds in 1897, at that time under the firm name of F. L. and J. C. Olmsted (see accompanying Plan). Subsequently, a substantial proportion was graded and planted under their direction by

the Water Board from time to time up to 1908. This work included the sub-grading of several roads in addition to those already open, and the plan called for relief from the stiff, rock-faced shore line paralleled by a high rail fence and for the abandonment of most of the shore road now in use. As it is impracticable to use the strip near the shore for golf in any case, the opening of these additional roads would still further reduce the area available for golf, and, in fact, would not leave sufficient space for an eighteen-hole course.

We have here two conflicting interests, the highest esthetic development of the landscape of the park, which the Olmsted plan would undoubtedly produce, made fully available to all passing motorists by a convenient and artistic system of roads, and a somewhat less beautiful development, still capable of affording access to motorists and including the very practical recreational facility of golf. Two points should be noted in this connection: a plan for the golf course should properly be accompanied by a revised park development plan, including the modification of the present stiff shore line, thus materially reducing its present inartistic appearance; furthermore, as golf involves but little change in the general contour of the land, a return to the original plan might later be made if conditions should ever demand it.

The automobile has so changed conditions since 1897 that the former afternoon drive about the pond is now a spin of a few minutes. To play eighteen holes of golf, however, occupies about two hours; and though fewer could be accommodated by golf than on the roads, provision of the two means of recreation is not necessarily mutually incompatible should it prove desirable to retain the road. As a matter of fact, golf, in addition to attracting a large number of players who did not previously use the park, will undoubtedly also add materially to the interest of the park for others. It would therefore appear reasonable to depart from the original policy in developing the park to the extent of omitting those roads planned but not now open, and reducing proposed planting, and in a few cases existing planting to an amount compatible with the development of an eighteen-hole golf course. At the same time the present shore road may be either eliminated or relocated so as not to be actually on the shore for most of its length.

As no map of the present topography around Fresh Pond could be found, a sketch map has been compiled chiefly from plans courteously loaned by Olmsted Brothers, and on this a tentative study made, which demonstrates the feasibility of laying out eighteen holes. (See

accompanying plan.) Even in laying out this very tentative scheme, particular attention had to be paid to a number of practical points affecting the design and operation of public golf courses.

II. PRACTICAL POINTS

Municipal golf differs from golf in private clubs chiefly in two respects, the emphasis placed on service to the maximum number and the great proportion of relatively unskilled players. In fact, public golf courses are found to be excellent preparatory schools for the clubs, as many first take up golf on the municipal grounds and then become such devotees that they graduate to the private club, with its superior facilities for skilled play.

A first rule in municipal golf is: few hazards and few short holes, as both of these take longer to play through than the straight-away parts of the course and thereby reduce materially its total capacity. This is particularly important at the beginning and ending of the eighteen holes. Two long, easy holes at the start get people quickly away from the house, and thus reduce the crowd at the first tee. Though many short courses are giving good service, about six thousand yards is the proper length to secure if possible.

Second, holes should not be laid out so as to be readily played by experts only, but with almost insuperable obstacles to a fair score by average players. The veriest beginner should have a chance, though better and better play should produce its reward in lower and lower scores. As in private courses, bunkers should be installed gradually as actual playing demonstrates their need, but they should never be many.

The first attention should be devoted to getting the greens in shape. All obstacles to play except hazards should be removed for a width averaging one hundred and fifty feet along the line of play; and the fair-greens from a point about fifty yards in front of the tee to the putting green should be graded smooth, areas likely to remain wet in the spring or after heavy rains drained, all small hummocks and holes eliminated, and the surface seeded down to a good lawn. Immediately in front of the tees and outside the width of one hundred and fifty feet, the ground may be somewhat rougher and the grass left longer, but not so unkempt as to involve frequent lost balls. The tees should be about six by eight feet and the putting greens roughly fifty to seventy-five feet in diameter. They should not, however, be graded absolutely

level, as was the earlier custom, nor should they, on the other hand, be very irregular, since this delays the game unduly for a public course. Their surface should be perfectly smooth, with a short growing grass that will stand close clipping. Facilities for watering all putting greens will be required and possibly for certain sections of the fair-greens, where the underlying soil permits the grass to dry out frequently. This installation of water, even though pipes close to the surface are permissible, may prove one of the heavy items of initial expense.

Other items will include equipment for maintenance and, and last, but not least, the golf house. This should be located at the most accessible point both for motorists and trolley-car riders, preferably commanding a view of the course. It should provide locker rooms, showers and toilets for men and women, check rooms and possibly a lunch counter. It should be so designed that the initial installation of, say, three hundred lockers, can be doubled as the demand increases.

The total cost of establishing the eighteen-hole course may be from $10,000 to $25,000. It may cost from $3,000 to $12,000 per year to operate, depending partly upon the attendance; but this expense can be largely or wholly recouped from fees, which, if kept low, are proper in this form of recreation, as it will be utilized by a fraction of the citizens only. On some of the hundred or more municipal courses in the United States, an annual ticket for about $6, monthly $2, daily for fifty cents, or twenty-five cents per game, with a locker fee of about $6, is found to meet the major portion or all the running expenses. In several cities the course is in charge of a professional, who, in return for his services in directing maintenance, ranging the course on crowded days, and furnishing an attendant to issue tickets and slips, may be permitted to be the only paid instructor and to sell clubs and balls and make repairs, besides receiving a fee of, say, five cents for towels and for checking. If a lunch room is run, the caterer may, in return for his privilege, serve as janitor.

Maintenance will probably occupy the time of four or five men and one or two horse or power mowers throughout the season, in Massachusetts climate usually from late in April to early December. In the spring extra help will be required in rolling the fairgreens and getting the course in order, and again when the longer grass on the sides is mowed. Putting greens should be mowed twice a week and watered every night or two in dry seasons, this requiring the services of one or two men. Fairgreens may be mowed once a week, which will

consume the full time of one or two men. Weeding and raking sand in bunkers will be more or less continuous.

In its operation on crowded days, the municipal golf course meets its severest test. Probably the fairest way to accommodate the greatest number is that employed in several cities of requiring all players on such days to participate in foursomes and providing a book in which players may sign up for a given time. Under this scheme, if a foursome is allowed to start every five minutes from early morning to sunset, every second period may be assigned to those signing up in advance. Those who have not signed up will then be permitted to start on the alternate periods, but obviously will have to wait their turn if there are many desiring to play. Slips are issued to each player on presentation of his ticket, designating the period to which he is assigned. These are punched at the first tee by the checker and taken up at the last tee. On crowded days it usually proves necessary to provide rangers, who may request players to present their slips and who prevent cutting in or starting at any but the first tee. A brief but concise set of rules is often posted at each tee; and all players are required to conform to them. As in public parks roads, paths and areas of shrubbery are likely to occur near the course, playing of balls driven upon them from a point within the course but not nearer the hole without penalty is customary. Where informal clubs are established, they do much to keep the morale of the players to a high standard. They also are a means of securing for players reciprocal privileges with private clubs.

After the course has gotten into shape, and its recreational opportunities have become appreciated, an attendance of several hundred a day and tens of thousands in a season may be confidently expected. At Franklin Park, Boston, a yearly attendance of some 27,000 has been recorded and permits issued in one year to over 2700 different players. Municipal golf offers a splendid opportunity to add another democratic sport to public recreation.

III. PROCEDURE

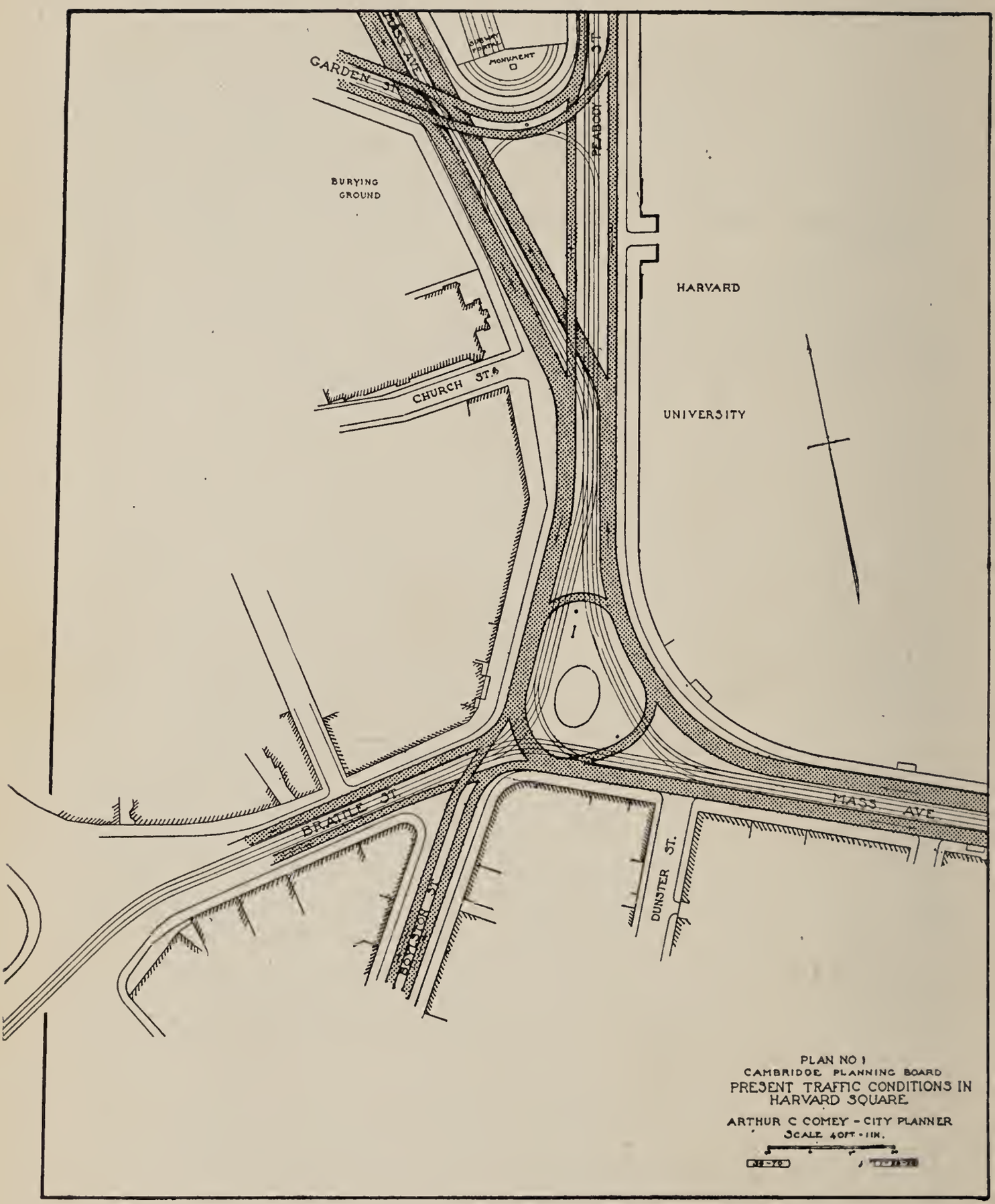
To provide golf at Fresh Pond involves four steps the first year:

1. *An acurate topographic map,* to be prepared presumably by the city engineer, at a scale of one hundred feet to the inch, showing one-foot contours (except that on steep slopes five-foot contours will suffice), and the location of roads, paths, trees (stating diameter and indicating roughly the spread), and all areas covered with shrubbery.

2. *A general plan,* at a scale of two hundred feet to the inch, showing location of the eighteen holes and the club house, and the modified scheme of development of the park roads, paths and planting.

3. *Construction plans* showing drainage systems for wet areas, water supply for putting greens, etc., areas to be filled in and other grading, areas to be in long grass, fairgreens, putting greens and tees, new roadways and paths, all trees and shrub areas to be cut down or transplanted, with new locations for the latter, new planting, and the golf house.

4. *Initial construction during the year,* which may be confined largely to fairgreens and putting greens, so that not less than nine of the eighteen holes may be played the following year.



PLAN NO 1
CAMBRIDGE PLANNING BOARD
PRESENT TRAFFIC CONDITIONS IN HARVARD SQUARE
ARTHUR C COMEY - CITY PLANNER
SCALE 40FT = 1IN.

INPROVEMENT OF TRAFFIC CONDITIONS IN HARVARD SQUARE, CAMBRIDGE

Cambridge, Mass, March 5th, 1920.

To His Honor the Mayor and the City Council:

Harvard Square is a dangerous place for pedestrians; it is becoming inconvenient for vehicles; little increase in surface street car service would be possible; and underground the conditions on the northern loading platform at the rush hour have been for some time little short of criminal.

No one phase of the traffic problems of the square can safely be studied alone, with a view to remedying conditions, for a solution of any one problem may be very serious in its incidental effect on some other type of traffic. For example, the recently developed scheme of routing outbound Arlington cars during the rush hours over the surface relieves congestion in the subway, but at the same time much increases the danger to pedestrians and inconvenience to vehicles, not to mention difficulties of car operation on the surface.

On the other hand the Planning Board has not felt that reliance should be placed on distant improvements, but rather that relief of conditions in Harvard Square should be sought by changes in the square itself and its immediate vicinity.

Small changes will not effect great improvement. But the fact that unless changes are made conditions will grow steadily worse, leads the Board to recommend strongly that some improvement be made at once and that a scheme of improvements be followed that will ultimately entirely solve the traffic difficulties in the square.

The attached report of the Board's consultant indicates briefly the nature of and reasons for such a series of changes, both in the regulation of traffic and in the physical plan of Harvard Square. It is confined strictly to the traffic problem and only touches on those changes found necessary effectively to relieve traffic conditions.

The Planning Board urgently recommends that the following steps be taken at once, in conformity with the appended plans:—

1. Mark pedestrian crossing by white paint and place signs warning drivers of vehicles to go slowly. (Plans No. 2 and 5).

2. Require vehicles going north from Brattle, Mt. Auburn or Boylston Streets to enter the square by Dunster Street (as on Plan No. 4).

3. Remove the sidewalk along the Common on the west side of Massachusetts Avenue only.

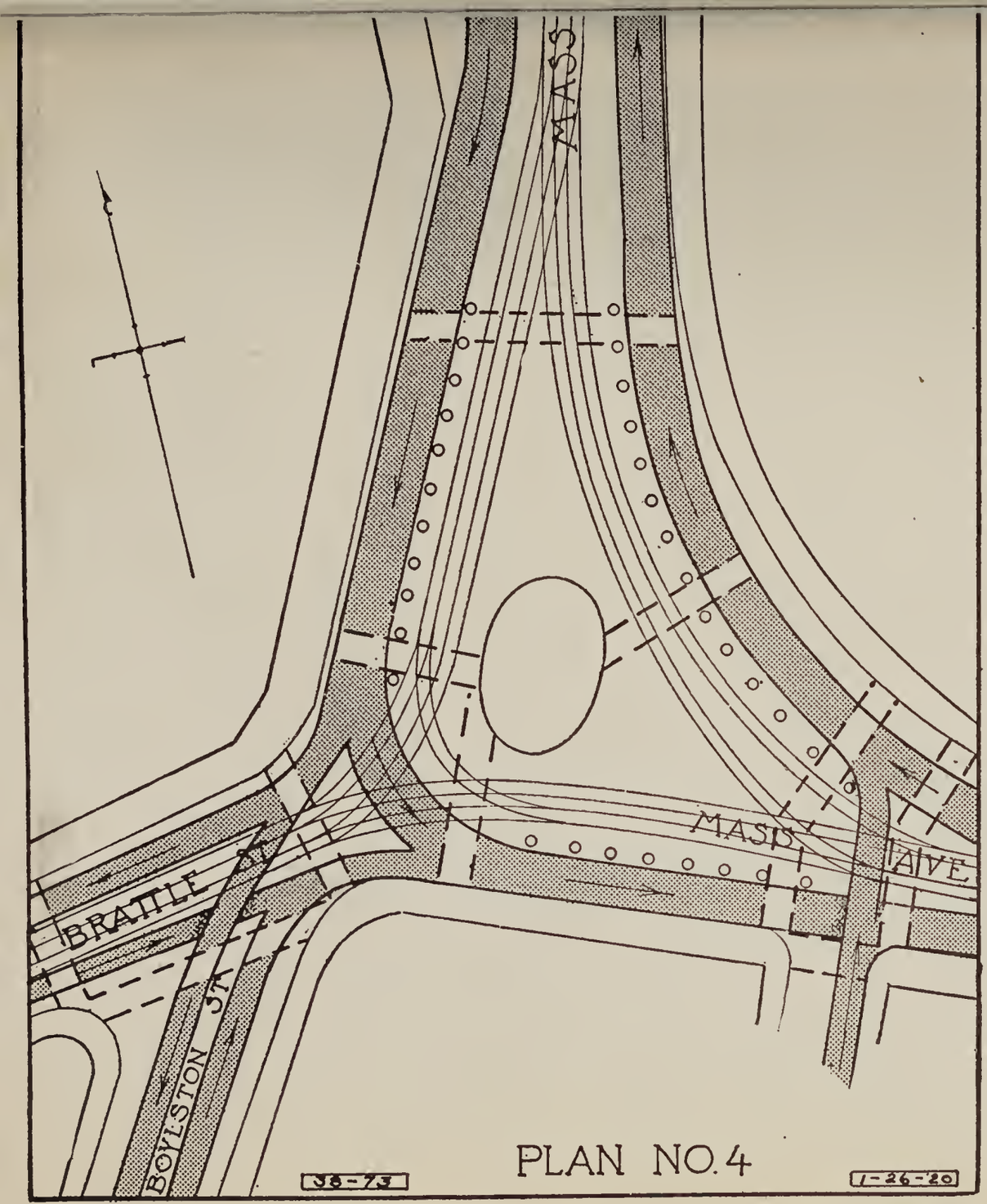
4. Widen Peabody Street on its west side and Cambridge Street on its north side and require all northbound Massachusetts Avenue vehicles to follow these streets (Plan No. 6).

5. Lengthen the northern subway loading platform.

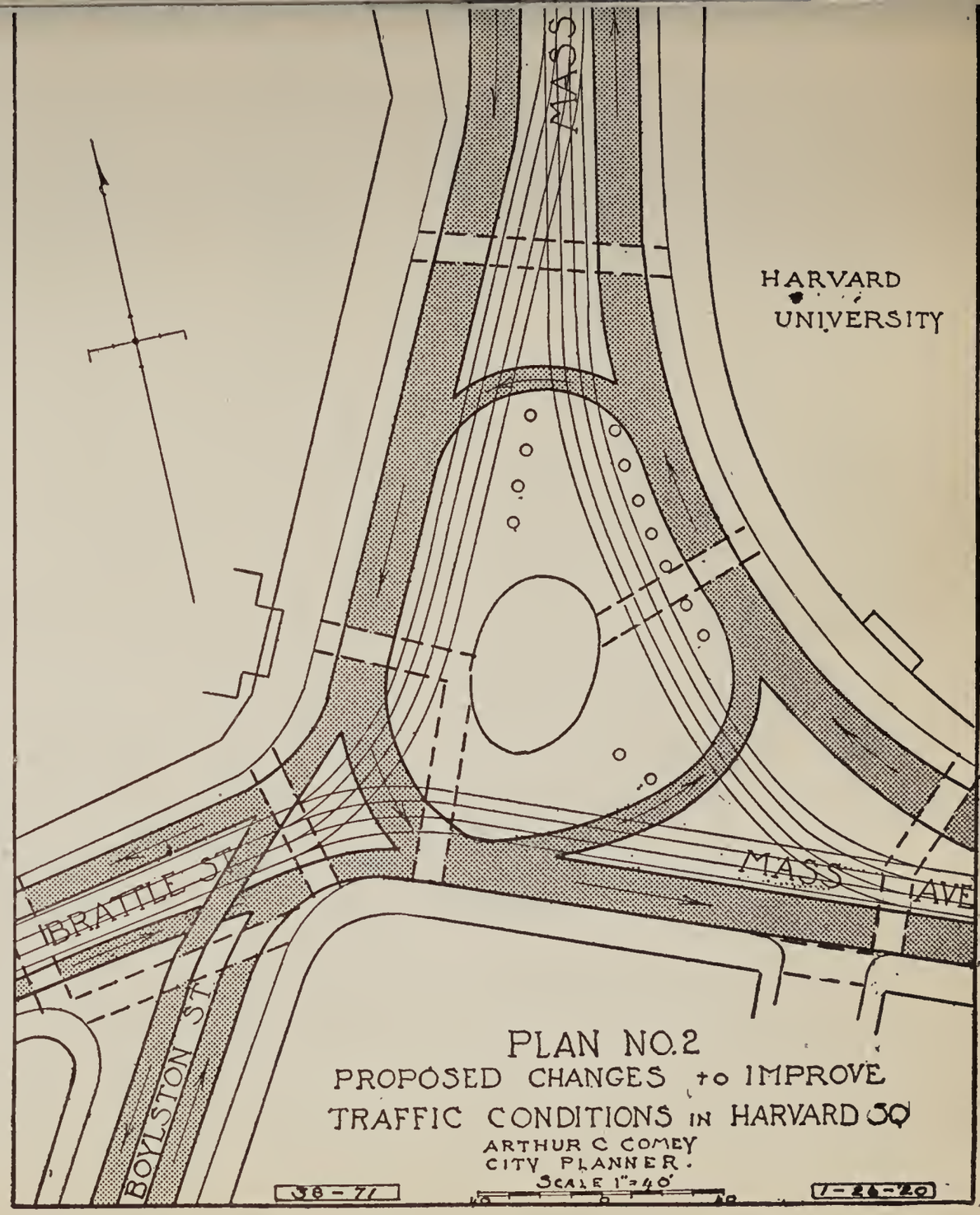
Respectfully submitted,

CAMBRIDGE PLANNING BOARD,

By William Fenwick Harris, Chairman



PLAN NO. 4



PLAN NO. 2

PROPOSED CHANGES to IMPROVE TRAFFIC CONDITIONS IN HARVARD SQ

ARTHUR C COMEY
CITY PLANNER.

SCALE 1"=40'

REPORT TO THE PLANNING BOARD

By ARTHUR C. COMEY

Consultant on City Planning

February 24th, 1920.

Traffic in Harvard Square may be divided into four classes, each with more or less conflicting interests:—

A. Surface	I. Pedestrians
	II. Vehicles
	III. Street Cars
B. Underground	IV. Subway

Present conditions are indicated by plan No. 1, showing location of buildings, street lines, curbs, tracks, and, by bands, the flow of vehicular traffic as now regulated.

I. PEDESTRIANS

Danger and inconvenience to pedestrians is today the most serious problem in Harvard Square. This is due first to the indeterminate movements of vehicles, and second to the frequency of vehicles moving at relatively high speed.

Crossing the square by pedestrians may be made safer if the authorities

(1) Mark crossings at right angles to curbs on pavement by while paint, requiring pedestrians to keep to them and notifying vehicles by signs to "GO SLOWLY AT PEDESTRIAN CROSSINGS," with heavy penalties to drivers for accidents to pedestrians on crossings caused by speeding. See plan No. 2.

(2) Make safety area in center of the square more definite by more posts (these are probably preferable to a curb and platform). See plan No. 2.

(3) Nos. 1 and 2 may advantageously be combined. See plan No. 2.

(4) Extend safety area in center and include narrow safety areas on outside of car tracks. Along south side of the square this involves moving tracks out to about 26 feet from curb. For this track lay-out see plan No. 4.

(5) Nos. 1 and 4 may advantageously be combined.

More drastic regulation of vehicular traffic would benefit pedes-

trians still more, but would in most cases bring other dangers and inconveniences. Thus, diverting of traffic from Harvard Square would drive it upon narrower streets less able to handle it and would tend to produce dangerous crossings elsewhere farther from the traffic policeman.

Extensive street changes at more or less remote points would undoubtedly benefit Harvard Square traffic conditions, but are considered outside the scope of this report.

If a second policeman can be stationed in the square, however—as will have to be done eventually as traffic develops—both vehicles and pedestrians will be benefited if authorities

(6) Eliminate left hand turns for vehicles, except for those coming south on Massachusetts Avenue and continuing east on it. Vehicles going from Brattle, Mt. Auburn, or Boylston Streets north on Massachusetts Avenue or Peabody Street would have to come north on Dunster Street, which would be made a one-way street, crossing east-bound Massachusetts Avenue traffic at right angles under the direction of the second traffic policeman. Pedestrians could at the same time cross in safety. Vehicles coming west on Massachusetts Avenue, going to Brattle, Mt. Auburn or Boylston Streets would have to come west on Mt Auburn Street from Putnam Square, as many now do; or those for Brattle or Mt. Auburn Streets might go, as some now do, out Garden and Mason Streets. Local Brattle Street traffic would go through Church Street, which might be a one-way street and should be widened in any event. For this regulation of traffic see plan No. 4.

(7) Nos. 1, 4 and 6 may advantageously be combined, as shown on plan No. 4.

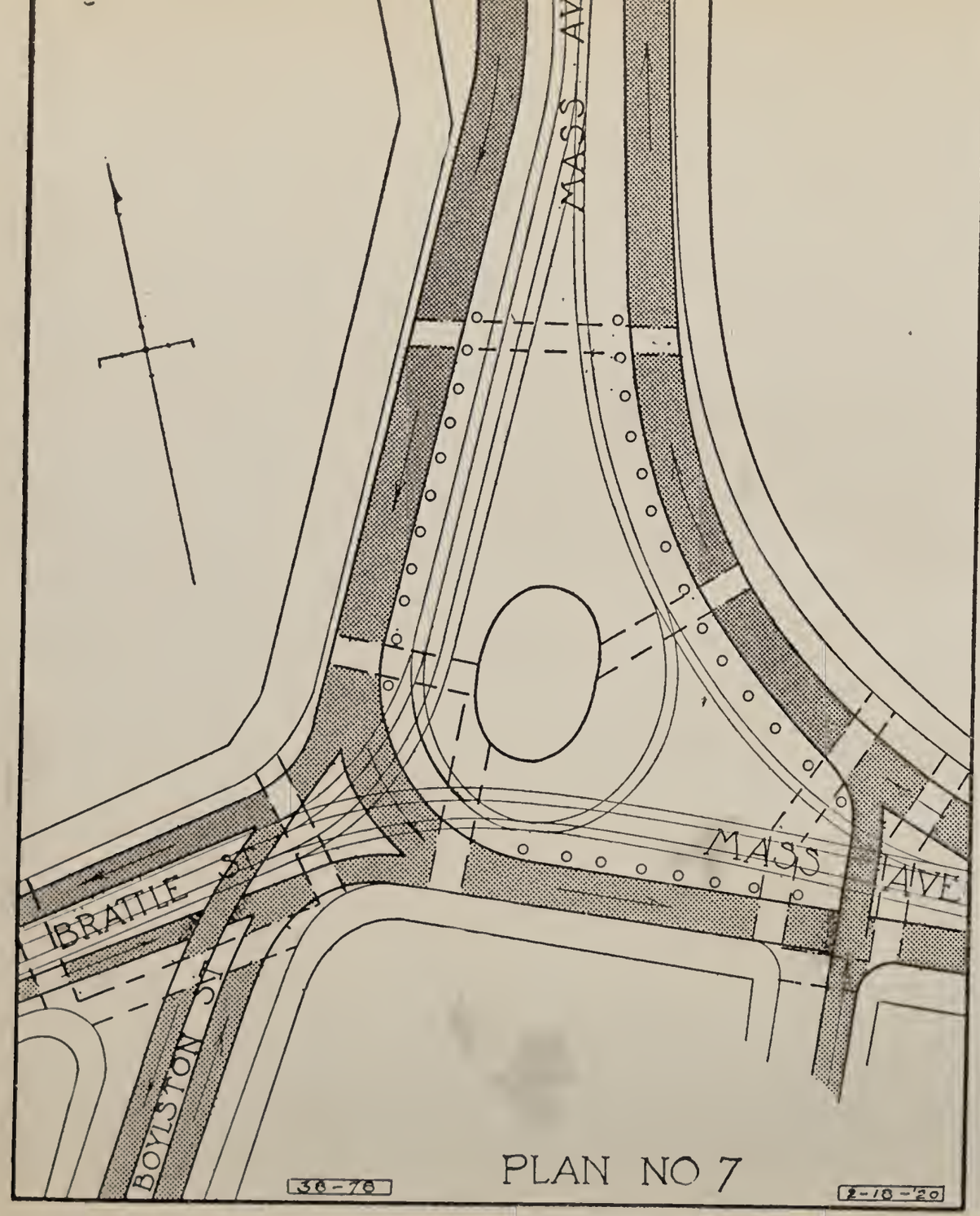
At the north end of Harvard Square, pedestrian crossings from Garden and Church Streets to Harvard University may be made safer if authorities

(8) Mark pedestrian crossings on pavement in white, with the same rules as under No. 1, and install several traffic posts. See plan No. 5.

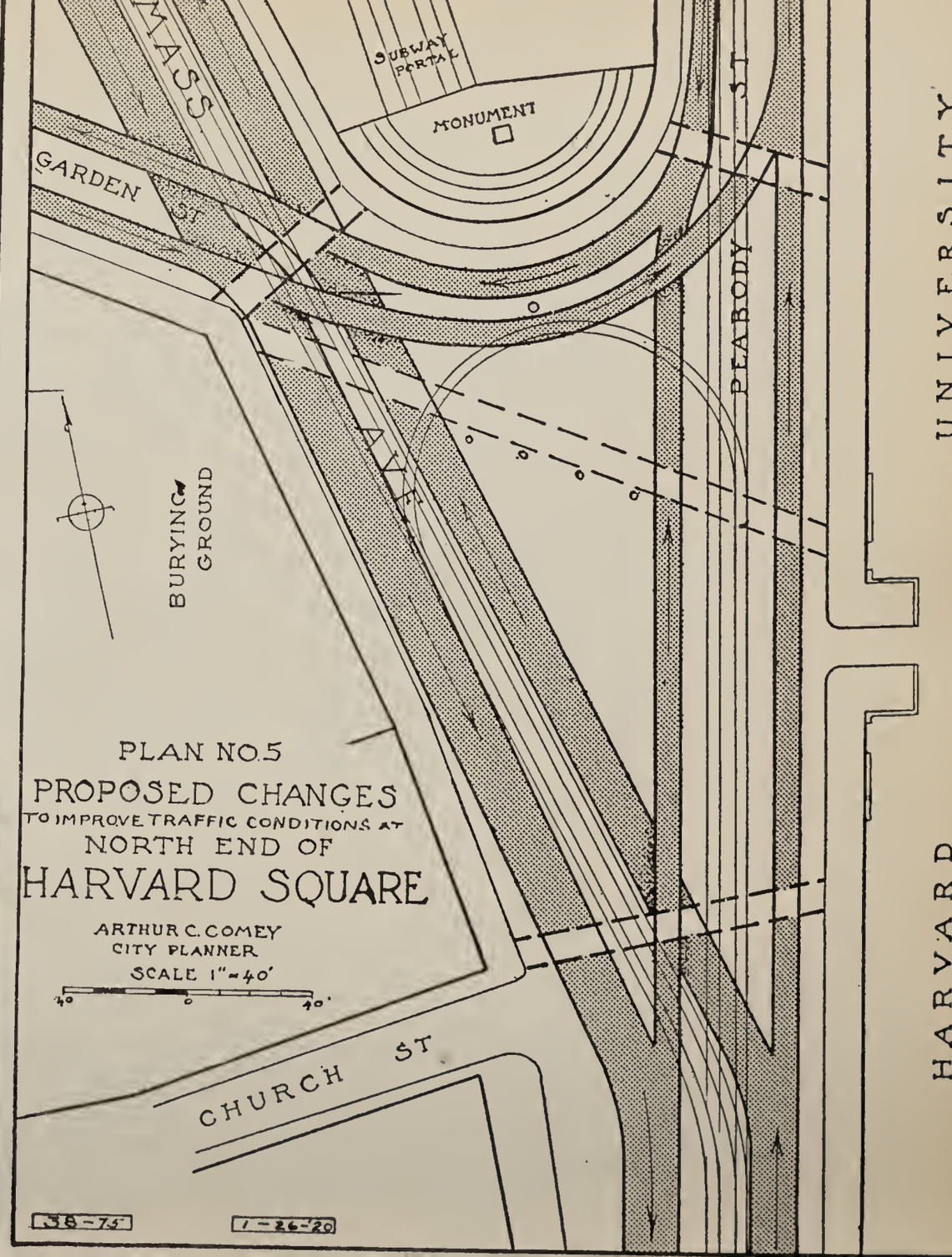
(9) Regulate vehicular traffic as described under Vehicles, No. 6.

II. VEHICLES

Vehicular traffic is not seriously endangered or inconvenienced in Harvard Square at present. It would, however, be made more convenient if authorities


MASS AVE
BRATTLE ST
BOYLSTON ST
MASS AVE
38-76
2-10-'20

PLAN NO 7


MASS AVE
SUBWAY PORTAL
MONUMENT
GARDEN ST
BURYING GROUND
MASS AVE
PEABODY ST
UNIVERSITY
HARVARD
CHURCH ST
PLAN NO.5
PROPOSED CHANGES
TO IMPROVE TRAFFIC CONDITIONS AT
NORTH END OF
HARVARD SQUARE
ARTHUR C. COMEY
CITY PLANNER
SCALE 1"=40'
40
0
40
38-75
1-26-'20

(1) Move tracks on south side out to about 26 feet from curb, as recommended under Pedestrians, No. 4.

Vehicular traffic would be made safer if authorities

(2) Made left hand turns sharper and farther from center.

(3) Nos. 1 and 2 would each be helped by the other, as contemplated under Pedestrians, No. 4.

(4) If a second traffic policeman can be stationed in the square the elimination of left hand turns as recommended under Pedestrians Nos. 6 and 7 would be a benefit. See plan No. 4.

Outside Harvard Square proper, vehicular traffic will benefit if authorities

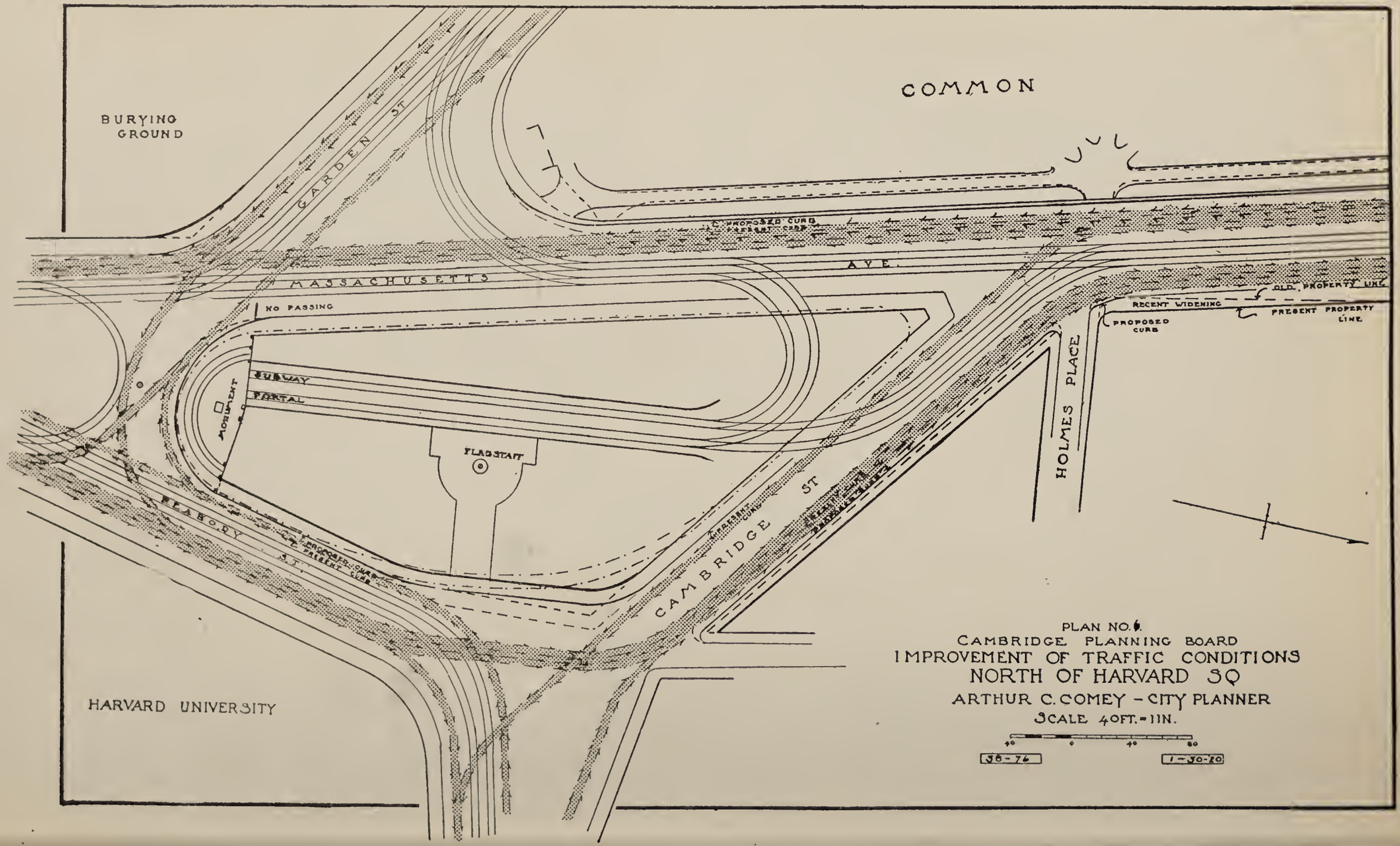
(5) Widen Massachusetts Avenue, the backbone of Cambridge, to a uniform width of about 86 feet between property lines. North of Harvard Square the only change needed is from Garden Street to Waterhouse Street, including the removal of the sidewalks along the two commons and placing them inside the fence, and rounding off the corner of Garden Street and Massachusetts Avenue some ten feet. The widening of the larger common is shown on a plan in the Planning Board's file, and, it is understood, will be carried out soon with funds from the Government's payment to Cambridge for damage to the Common during the war.

(6) As an alternative to widening along the smaller—eastern—common, require traffic north bound to proceed from Harvard Square via Peabody and Cambridge Streets, the latter widened on its northeast side some ten feet, and the curb at the corner of Massachusetts Avenue and Holmes Place still further rounded off. This would obviate the present long diagonal crossings of vehicular and street car traffic on Massachusetts Avenue. Peabody Street would then, however, need to be widened some ten feet on its west side to accommodate its present south-bound traffic, which could not well be eliminated, a desirable improvement in any case, as even now it is a danger point. See plan No. 6.

III. STREET CARS

There appears to be no serious difficulties in street car movements on the surface on the present schedules. Loading and unloading would be made more convenient and safer if authorities

(1) Extend the safety area in the center and include narrow safety areas along the car tracks, as recommended under Pedestrians Nos. 4 and 6.



PLAN NO. 6.

CAMBRIDGE PLANNING BOARD

IMPROVEMENT OF TRAFFIC CONDITIONS NORTH OF HARVARD SQ

ARTHUR C. COMEY - CITY PLANNER

SCALE 40FT. = 1IN.

38-74

1-30-20

(2) If additional loading facilities underground are provided Viaduct cars might be run through the subway, as suggested under Subway No. 5.

(3) If additional facilities are not provided underground, facilities on the surface can be increased by installing a curve, permitting cars going north from the square to load from two tracks, one on either side of the subway entrance. See plan No. 7. However, any increase in the number of cars operated through the square on the surface will interfere with proper movement of vehices, unless cars are operated on the loop system, coming south on Massachusetts Avenue and returning instead of going out Brattle Street, and even in that case the interference and danger to pedestrians would be much increased.

(4) If a line should ever be built from Allston it should come through Eliot Street and either go through the square in the subway or on the surface as part of a through route, thus avoiding additional car movements.

IV. SUBWAY

Train movements through the square appear to be unimpeded. Conditions at the western transfer for surface cars are reasonably good, but at the northern transfer they are congested at rush hours.

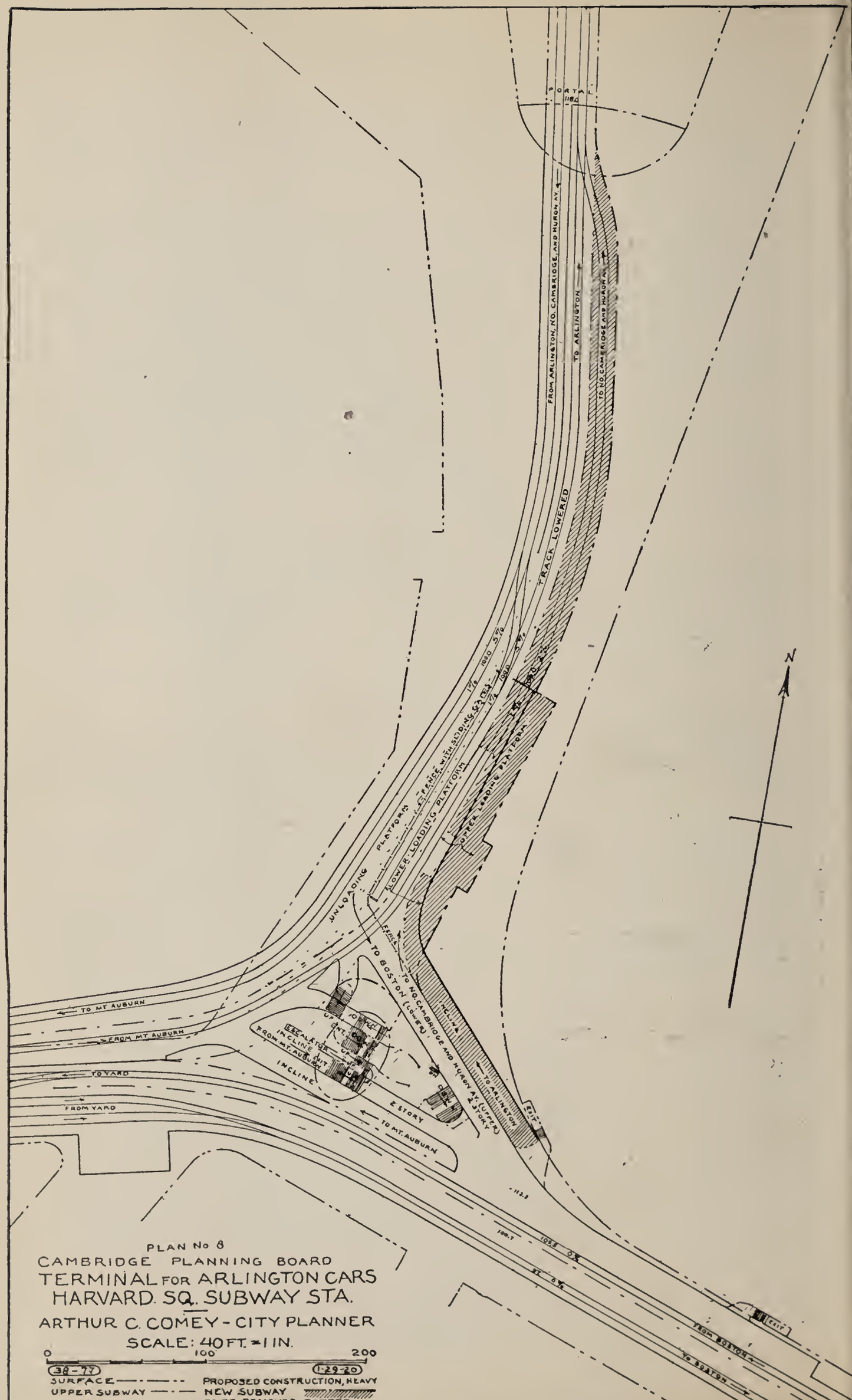
a. Some slight *temporary* relief will probably result if authorities

(1) Install a visible system of announcing car berths.

(2) Also establish customary berths for cars: 1, Arlington Heights; 3, North Cambridge; 5, Huron Avenue; 2 and 4, for either of adjacent routes. This involves dispatching cars into subway at Mt. Auburn Street, with a block signal system operated by a man in a tower. Absolute regularity would not be attempted, but cars would be sent in in a more ordered fashion than at present, when frequently so many of one line go through that several are empty or nearly so, while those of other routes are badly overcrowded. Relief of congestion from this change would be slight, but it would also prevent running about and attempting to board cars at the unloading platform. The latter practice should be broken up at once in any case.

b. *Permanent* relief will result if authorities

(3) Develop transit in metropolitan Boston, unifying all rails



PLAN No 8

CAMBRIDGE PLANNING BOARD

TERMINAL FOR ARLINGTON CARS HARVARD SQ. SUBWAY STA.

ARTHUR C. COMEY - CITY PLANNER

SCALE: 40 FT. = 1 IN.

0 100 200

38-77 1-29-20

SURFACE —·—·— PROPOSED CONSTRUCTION, HEAVY

UPPER SUBWAY —··— NEW SUBWAY

LOWER SUBWAY ——— TO BE REMOVED, DOTTED

in a single system, and electrifying several steam lines for frequent passenger service, with free transfers to all other lines, including Fitchburg Division, Central Massachusetts or Lexington Branch, these to be connected to existing or new tunnels with several stations in the Boston central district, thus diverting bulk of commuting traffic on Massachusetts Avenue at Porter Square or farther out yet. As an alternative the present subway may be extended to Porter Square, but this would be more costly and a less far-reaching solution. This was discussed at length in a report I previously submitted. Incidentally, whatever the development of metropolitan transit, a zone system of fares, say on a five cents per zone basis, would stabilize travel though it might not reduce it. At present Cambridge riders pay part of the cost of transporting Arlington riders to Boston, and furthermore, Cambridge taxpayers in making up the "El" deficit are enriching Arlington taxpayers, whose land is more valuable by reason of the uniform fare.

c. In the *interim* relief will result if authorities

(4) Lengthen and widen the loading platform, extending it 100 feet north.

(5) No. 4 may advantageously be coupled with the installation of a visible system of announcing car berths and also the establishment of customary berths for cars: 1, 2, Arlington Heights; 4, 5, North Cambridge; 7, Huron Avenue, as recommended in No. 1.

(6) Construct an underground terminal for Arlington cars at Harvard Square. A loop, while involving a grade crossing underground, would probably be the best from an operating standpoint, though the most expensive to install. A cheaper solution would be a stub terminal, either alongside the train platform, still using a grade crossing, or between the two through surface car tracks. See plan No. 8. Cars would be operated singly during the day. On the stub terminal during rush hours cars would be operated in threes—preferably a car with a trailer followed by a single car, as three-car trains are rather long for surface operation on streets without center reservations. On the return trip the trailer would be coupled to the other car and leave first. The plan as shown has the advantage that it could readily be constructed with very little interference with full use of the subway meanwhile.

This relief of present trackage would also permit Viaduct cars to be operated through the present subway if desired, with a short bit of new track from the northern portal to Cambridge Street.

Any of these schemes is preferable to routing some of the cars on the surface, as discussed under Street Cars, No. 3, though of course much more expensive to install.

ZONING FOR CAMBRIDGE

Cambridge, Mass., June 30, 1920.

To His Honor, The Mayor and The City Council:

Zoning is the creation of districts with different regulations prohibiting injurious or unsuitable buildings and uses of structures and land.

The right for cities to establish zoning regulations restricting the size of buildings has been recognized in Massachusetts for some time. Following the adoption of a Constitutional Amendment by the people an act enabling cities to put into effect zoning according to the use of buildings was sought. When it was learned that bills introduced at the opening of the 1920 session of the General Court would probably not be deemed constitutional by the Attorney General a new bill was prepared inconsultant with Judge Robert Walcott, of Cambridge, Arthur C. Comey, the Board's Consultant and Flavel Shurtleff, Secretary of the American City Planning Institute, and was submitted at the suggestion of the Legislative Committee on Mercantile Affairs to the Supreme Court for an opinion as to its constitutionality. After its approval by the Justices (House Doc. No. 1774) it was reported by the House and enacted into law June 4, 1920, as Chapter 601 of the Acts of 1920.

Anticipating this legislation the Board had prepared by its consultant a report and preliminary drafts for ordinances and plans for zoning the city according to bulk and according to use of buildings, all of which are appended hereto. (The tentative ordinances are not printed, as they are simply technical amendments of the Building Code).

Briefly, while the present Building Code insures a meagre supply of light and air to all buildings in the city, it is recognized that a more generous provision is suitable for many sections of Cambridge and that in some sections conditions approaching adequacy can be maintained. As to use it is recognized that heavy industries have no place far outside the present industrial districts except along the railroads and that residential districts should not be invaded by either industries or business.

This study into zoning was begun in response to an order from the City Council several years ago. Owing to the complexity of the subject and the previous lack of authority for the city to proceed no

final report has hitherto been made. The Planning Board now presents this report and recommends the appointment of a Committee of the City Council to hold hearings throughout the city on the general basis of the preliminary plans and ordinances appended hereto in order to inform the citizens of the benefits to be derived from a maturely worked out zoning scheme, and to ascertain what local changes should and can be made in the plans to meet so far as possible their desires. So far as its time and finances permit the Board will be glad to co-operate with such a Committee.

Respectfully submitted,
WM. E. HARRIS, *Chairman*
ROBERT E. MARTIN, *Vice-Chairman*
WALTER F. EARLE
BENJAMIN ROSEMAN
Cambridge Planning Board.

ZONING FOR CAMBRIDGE

REPORT TO THE CAMBRIDGE PLANNING BOARD BY ARTHUR C. COMEY, CONSULTANT ON CITY PLANNING.

FEBRUARY 17TH, 1920.

"Zoning is the creation by law of districts in which regulations differing in different districts prohibit injurious or unsuitable buildings and uses of structures and land."

(Edward M. Bassett)

For a popular definition of the meaning of zoning, reference is made to a statement in "Civic Comment," June 16, 1919, by Lawson Purdy, copy of which is hereto attached. For a more extended but concise statement of the essential elements of the subject, reference is made to the forthcoming pamphlet of the American City Planning Institute, based on the report of E. M. Bassett, copy of which is also hereto attached.

"Zoning regulations fall naturally into two classes, those affecting the bulk of buildings and those affecting their use. The enactment by ordinance of zoning regulations affecting the bulk of buildings has probably been permissible in Massachusetts cities for some time, as the establishment of two classes of height districts in Boston has been upheld by the United States Supreme Court and a statute provides that 'Every city, except Boston, and every town which accepts the provisions of this section or has accepted the corresponding provisions of earlier laws may, for the prevention of fire and the preservation of life, health and morals, by ordinance or bylaws not inconsistent with law and applicable throughout the whole or any defined part of its territory, regulate the inspection, materials, construction, alteration, height, area, location and use of buildings and other structures within its limits, except such as are owned or occupied by the Commonwealth and except bridges, quays and wharves, and may prescribe penalties not exceeding one hundred dollars for each violation of such ordinances or by-laws.' "

As there has been some question of the constitutionality of enacting by ordinance zoning regulations affecting the use of

buildings a constitutional amendment was proposed by the Constitutional Convention and was adopted by the people Nov. 5, 1918, as follows:—"The general court shall have power to limit buildings according to their use or construction to specified districts of cities and towns." The General Court of 1919 failed to enact legislation enabling cities to proceed under this amendment owing to legal objections to the bills proposed. At the present writing the committee of the House of Representatives in charge of the proposed bill has stated that it favors enactment of such a law, provided any delegation of the general court's power in this manner is deemed constitutional.*

Elsewhere the reasonable application of zoning has been held a reasonable use of the "police power" so-called. This power to zone has been confirmed by a unanimous decision of the United States Supreme Court (Hadacheck v. Chief of Police, Los Angeles; 239 U. S. 394): "Private interests must yield to the good of the community." It refers to another decision (Heinman v. City of Little Rock; 237 U. S. 171): "If such power is not exercised arbitrarily or with unjust discrimination, it does not infringe upon the rights guaranteed by the 14th amendment."

Zoning to be held reasonable must conform largely to prevailing existing conditions. In the past six years an extensive series of maps of Cambridge has been made showing graphically a wide range of civic data. Many of the conditions thus disclosed are related in a general way to the zoning proposals, as for example:—

Distribution of Population, Map No. 42, printed in the 1916 Annual Report.

Trend of Population, No. 48.

Assessed Land Values, No. 55, in colors, printed in the 1917 Annual Report.

Street Widths, No. 57.

Street Grades, No. 58.

Estimated Traffic on Thorofares, No. 60.

The following maps have a more direct bearing on the problem of zoning according to bulk:—

Present Building Heights, No. 65, in colors, a typical section of which is reproduced at the end of this report.

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*Since enacted. See page 1 (of Board's letter).

Proportions of Lots Covered, No. 64, in colors, a typical section of which is reproduced at the end of this report.

Bulk of Buildings permitted under the present Building Code, a series of 30 diagrams appended to this report.

In fixing the tentative lines for zoning according to use one map of existing conditions received special study:—

Development of Property, No. 30, in colors, printed in the 1915 Annual Report.

This map shows the use of each piece of property in the city, whether public, such as city buildings, parks, etc.; quasi-public, such as churches, clubs, institutions and cemeteries; commercial, that is used for retail or wholesale business; industrial; railroad or residential, divided into tenement and apartment houses and one and two-family houses.

As zoning is in effect simply an extension of the long established right to regulate buildings in the common interest, it is fortunate for Cambridge that the present Building Code, which went into effect Nov. 27, 1917, is an excellent foundation on which to base the zoning ordinances. While it may not prove desirable in many cities, for one reason or another, it appears that in Cambridge the zoning provisions can very advantageously be incorporated in the body of the Building Code. This is particularly advantageous to builders and others using the code, as they do not have to seek in several places for the regulations affecting their work. The Cambridge Building Code has already established a detailed classification of uses of buildings, the requirement of occupancy permits and many other features seldom found in codes a few years ago, but essential to an effective scheme of zoning.

It is proposed that the present Building Code shall continue to apply without change in the districts to be least restricted. Where, however, owing to the prevalent character and intensity of use a more restrictive code is appropriate it is proposed that amendments to the code enacting such restrictions shall apply. These proposed amendments are presented in tentative drafts for two ordinances, accompanying this report, one applying the principle of zoning according to bulk, the other according to the use of buildings. A component part of each ordinance will be the final plan for Bulk Districts and Use Districts respectively. Preliminary Plans Nos. 66 and 67 accompany this report.

As in the case of similar provisions of the Building Code at present, these restrictions are not retroactive, but apply to all new buildings and to alterations or changes in use of existing buildings. Any building, whatever its height, the proportion of the lot that it covers, or its use at the time these ordinances become effective, may continue to be occupied, but any changes must be for the better, that is so as to more nearly conform to the requirements for new buildings in its districts. Furthermore in certain instances where even this requirement would produce hardship exceptions are made, so that the ordinances will apply with reasonable leniency. Moreover provisions are included for initiating changes in the district boundaries whenever a sufficient number of those interested shall petition, or whenever conditions change so as to warrant the city authorities initiating changes. It will thus be seen that every effort is being made to make the application of zoning in Cambridge reasonable and adapted to local needs.

Bulk Districts

The first of the two ordinances proposed, that relating to bulk of buildings, provides for three new classes of districts. At the same time, to simplify the use of the Building Code and to avoid confusion, the present "fire district" so-called, which is District 1 in the present code, is retained, and the Present District 2 expanded into Districts 2, 3 and 4. Districts 1 and 2 will then have identical restrictions as to height and proportion of the lot allowed to be covered, being those at present in force throughout the city. They provide a general maximum height limit of two times the width of the street on which the building faces and 80 feet in any case, dwellings being further restricted to one story for each ten feet of street width. See Diagram of Heights of Buildings Permitted, at the end of this Report. Yard and court space required by the present code varies, being controlled by a large number of more or less interlocking provisions, which in the aggregate assure a meagre but relatively effective measure of light and air in dwellings. Other buildings may cover the entire lot. See Diagrams 1-30 showing proportions of lots which may be covered by buildings of various heights.

These methods of limiting bulk of buildings are sound and are followed in the provisions regulating bulk in Districts 3 and 4. In District 3 the maximum height is reduced to one and one-half times the width of the street and 60 feet and 4 stories in any case. Larger yards

and courts are required than in Districts 1 and 2, resulting in a fair amount of light and air. See Diagrams 31-47. In Districts 4 the maximum height is reduced to the width of the street and 40 feet or 2 and one-half stories in any case, except that one-family dwellings may be three stories high. This is generally recognized as approaching ideal conditions. All buildings in Districts 4 are required to have sufficiently large yards and courts to insure adequate light and air. See Diagrams 48-58.

Building Districts 1 and 2, in which the present Building Code applies unaltered, as drawn on the preliminary plans accompanying the tentative ordinance, include the large industrial areas of East Cambridge and Cambridgeport, a small area at Central Square, a larger area at Harvard Square and strips extending back one hundred feet from the street lines along the principal thorofares. Building Districts 3, the 60 feet or 4 story districts, include all the intervening areas as far north as Harvard Square, these being the areas appropriate for an extensive apartment house development. Districts 3, north of Harvard Square, include much of North Cambridge and several smaller areas and strips along thorofares where the logical future for the district appears to be the construction of apartment houses. Building Districts 4 include those sections north of Harvard Square where few or no apartments now occur and where manifestly the interests of the city and of the property owners in the vicinity would both be injured by their introduction by some selfish or misguided builder in the near future. As tentatively drawn they also include several areas, some of them contiguous to those just referred to, where it is of more local concern than of municipal interest, and where the property owners should have an opportunity to grasp this chance of preserving the character of their neighborhood. In fact, as previously emphasized, throughout the city it should be largely the voice of those actually living or doing business in each neighborhood that should determine the character of zoning regulations finally established, so far as such decisions do not absolutely destroy the value of city wide zoning.

Use Districts

The districts regulating the uses to which buildings may be put are three in number. In a self-contained city with a larger area four or more would undoubtedly be required, but Cambridge is a portion of the metropolitan Boston district. Within this district are sites appro-

priate to odorous, noisy, dirty industries, and large areas of cheap land suitable for one-family detached or semi-detached houses only, also sections devoted wholly to financial and other business offices, where even a small amount of light manufacturing would be objectionable. In Cambridge none of these conditions occur.

The proposed districts are progressively more restrictive. The present Building Code is to apply without alteration to the Unrestricted Districts in the proposed ordinance. These are substantially the industrial sections of the city and the contiguous areas into which they will naturally expand within a reasonable period, and include large parts of East Cambridge and Cambridgeport near the Boston & Albany freight railroad, as well as strips along the Fitchburg and Central Massachusetts Divisions of the Boston & Maine R. R. in North Cambridge, with a broader area in the Fresh Pond Marshes, for which the future development cannot yet be predicted.

In the Business Districts as proposed all heavy industries and large industrial buildings of any sort are excluded. As tentatively drawn they include the river front east of Cottage Farm Bridge, considerable areas in East Cambridge and at Central and Harvard Squares, and strips along parts of the thorofares where business seems likely to expand. Where in a residential community enough stores have already been erected to meet the local needs for a long time to come no business district is shown, as the present stores may, under the proposed ordinance, continue indefinitely.

The remainder of the city is included in the Residence Districts, in which new business or industrial buildings of any kind are prohibited. This as tentatively drawn covers part of East Cambridge, most of Cambridgeport west of Brookline Street and practically all of Old Cambridge and North Cambridge except along the railroads and parts of the thorofares.

WHAT ZONING MEANS

The term "zoning" has come to be used to mean the regulation of buildings in a city. It signifies such regulation of the height, area and use of buildings as will protect each land-owner from the impairment of his share of light and access, as will protect his ears from unseemly noises, his nose from unpleasant smells, and eyes from offensive sights.

Proper protection of the owner in these respects enhances the value of his land and conserves the value of his building. Owners

cannot have such protection for themselves without conceding the like protection for their neighbors. Appropriate regulation demands such rules that no parcel of land in the city can be used in such fashion that all similar land could not be improved with buildings of like kind without disadvantage to each and all of them. This is only common fairness, corporate equality.

Each street will accommodate a certain amount of traffic, pedestrian and vehicular. Each lot of land on that street is entitled to its proportionate share of access along the street. The welfare of each owner demands that no one owner shall make greater use of the street than the size of his lot entitles him to have. There is a direct relation between the facilities afforded by the street for traffic and the light and air furnished by the street. If the buildings are too high for the width of the street, light is cut off, and, at the same time, traffic is congested.

In every city there is a tendency for business and industries of like kind to group together. This is for their own good. If a manufacturing industry is intruded into a business or residential neighborhood, it impairs the value of all the surrounding property. There has been annually in the United States a greater destruction of the value of buildings by the failure to protect them from the improper use of neighboring buildings than is caused by fire. One manufactory erected on a business block may easily destroy several million dollars' worth of neighboring buildings. One garage on a residential block may destroy hundreds of thousands of dollars' worth of residences. High buildings have been erected that cut the rent roll of their neighbors in half.

Unfortunately, in every city some buildings are too high, cover too large a percentage of the lot, and are put to a wrong use. Zoning must proceed on the basis of existing conditions. Even the worst sections can be improved somewhat; some sections may be saved; new sections may be protected at the beginning of their development. In general, buildings in new sections should never be allowed to be higher than the width of the street. No building for human habitation in a new section should be allowed to cover more than 50 per cent. of the land. Single family dwellings may be protected by not being permitted to cover more than 30 per cent. of the land.

Zoning, properly conceived and carried out, thus constitutes not only a definite recognition of equality in ownership, but an important protection of taxable values.

LAWSON PURDY

STATEMENT OF PRINCIPLES OF ZONING BASED ON THE REPORT OF EDWARD M. BASSETT

(1) The subject in relation to city planning should be called zoning, the boards, zoning boards or commissions. In laws and ordinances the word zoning should be used in the title and the word districts in the body of the law to specify the areas affected.

(2) Zoning is the creation by law of districts in which regulations differing in different districts prohibit injurious or unsuitable structures and uses of structures and land.

(3) Zoning should be done under the police power of the state and not by condemnation.

(4) Zoning by the exercise of the police power of the state must relate to the health, safety, morals, order and general welfare of the community. It follows therefore that police power zoning must be confined to police power reasons such as fire risk, lack of light and air, congested living quarters and other conditions inimical to the general welfare. The preventive regulations based on these reasons, which necessarily must be applied differently and in different measure in different districts, naturally group themselves into zoning according to use of structures and land, according to height of buildings and according to portion of lot covered by buildings. Zoning might go further and embrace the subjects of fire limits, setbacks, and doubtless other classes of regulations. Enhancement of value alone, or æsthetics alone, has not thus far been considered by the courts to be a sufficient basis for zoning when done under the police power.

(5) Before enacting zoning regulations a city should have obtained the power to do so from the state legislature. The essential statement in such grant of power is that the city may impose different regulations for structures and for the uses of land and structures in different districts.

(6) Zoning is part of the city plan and should be applied to land as early as possible and where practicable at the time the street layout is adopted. Studies for zoning in undeveloped districts should be accompanied by studies for at least main and secondary thoroughfares.

(7) Zoning when applied to existing cities should be adopted generally to existing conditions but should endeavor to check undesirable tendencies.

(8) In the same city, localities having substantially like character and situation should be zoned in the same manner. This principle

should prevent arbitrary, piecemeal or partial zoning, which is dangerous and may be illegal.

(9) Zoning should be sufficiently stable to protect those who comply with the law, but at the same time should be susceptible of change by the municipal authority under strict checks prescribed by state law, so that it can be altered to harmonize with the city's growth.

(10) Provision should be made that interested property owners may initiate the consideration of changes, but the actual application of the zoning regulations to the land and any changes therein should rest with the municipal authority and not with the property owners. It is a wise expedient to require more than a majority vote or even a unanimous vote of the municipal authority to changes unless a substantial majority of the property owners affected thereby have given their consent thereto.

(11) Zoning regulations may properly be supplemented by restrictions in deeds based upon purely æsthetic reasons or for the purpose of creating a uniform residential development or for other purposes.

(12) Regulations applicable to all buildings of a class regardless of location, such as relate to plumbing, strength of material, safety devices, or protection of employees against fire, should not be placed in a zoning law. They are properly part of a housing law, factory law or building law. Only those requirements which differ in different districts enter into a zoning law.

(13) Use districts normally comprise residence, business, light industry and heavy industry districts. The kinds of industries prohibited in light industry districts should be enumerated. Residences should be permitted in business districts and both residences and business should be permitted in light industry districts. It is a moot question whether and under what conditions residences should be prohibited in heavy industry districts. Classes of use districts should be few. The more minute adaptation to local needs should as a rule be provided for in the area and height zoning and by permitting special uses under conditions stated in the ordinance or under the administration of a board of appeals empowered to make building exceptions. There is lack of agreement as to the desirability and legality of prohibiting apartment houses, flats, tenement houses and other multiple dwellings in certain districts limited to single family dwellings.

(14) Where zoning regulations apply only to new buildings (as

is the safer practice) non-conforming uses should be placed under a constant pressure to become conforming through time and changes.

(a) The structural alterations made in a non-conforming building should not during its life exceed one-half its value, nor should the building be enlarged, unless its use is changed to a conforming use.

(b) In a residence district no building or premises devoted to a use permitted in a business district should be changed into a use excluded from a business district.

(c) In a residence or business district no building or premises devoted to a use permitted in a light industry district should be changed into a use excluded from a light industry district.

(d) In a residence, business or light industry district no building devoted to a use excluded from a light industry district should be structurally altered if its use shall have been changed since the time of the passage of the ordinance to another use also excluded from a light industry district.

(e) In a residence, business or light industry district no building devoted to a use excluded from a light industry district should have its use changed to another use which is also excluded from a light industry district if the building has been structurally altered since the time of the passage of the ordinance.

(15) In business and industry districts towers within a prescribed height limit should be permitted but should not occupy over one-quarter of the lot area. They should be allowed on the street line all the way up, but should stand away from side lines according to a suitable rule.

(16) Height limitations should be determined primarily by widths of streets and the use of the property. There should also be flat maximum limitations irrespective of street widths which should be fixed with due regard to local conditions.

(17) Included in area limitations there should be a provision for the percentage of lot that can be covered and a limitation of families per acre or of the minimum square feet of lot area per family.

(18) There should be an administrative board with power under state law.

(a) To rectify on appeals the errors of building superintendents in passing on applications for building permits.

(b) To decide border line and exceptional cases of buildings where specified in the ordinance.

(c) To vary the literal requirement of the law in individual cases of buildings where unnecessary and excessive hardship is caused and the intention of the law is equally accomplished by an alternative method to be prescribed.

Not only should the powers of such a board be specified in the ordinance, but the state legislature should authorize the municipal authority to create such a board and to provide in the ordinance what border line and exceptional cases it may decide. A larger vote than a mere majority should be required for an affirmative decision. Proceedings and records of the board should be public and members of the board should be removable for cause. Decisions of the board should be subject to court review on suit by any citizen.

REVISION OF ORDINANCE

ARRANGEMENT

Divisions	Present Sections
1. Administration	Sections 1—8
2. Definitions	" 9 and 177 combined
3. Classification by Use	" 15, 16 (Use Districts)
4. Building Districts	" 18 (Districts)
	" 17 amended (Heights)
	" (—) (new, Height Exceptions)
5. Space requirements for Dwellings	" 179—184, 187, 188
6. Area regulations	" (——) (new) and 178 (modified)
7. Classification by Construction (Div. 3—Div. 7)	" 10—14; 19
8—28. (Construction) (No change)	" 29—172
29. Additional for dwellings	" 185, 186, 189—205
30. Existing Buildings other than dwellings	" 20—28
	" 206—214
31. Existing Dwellings	" 173—176, 215—216
32. Maintenance and Occupancy	

(Tentative Draft by Arthur C. Comey, Consultant, January 28, 1918. Matter with question marks subject to further study.)

CITY OF CAMBRIDGE

In the Year One Thousand Nine Hundred and Eighteen.

AN ORDINANCE ENTITLED:

"Regulation and Limitation of the Height and Bulk of Buildings hereafter erected and Regulation and Determination of the Area of Yards, Courts, and other Open Spaces, and Establishment of the Boundaries of Districts for the said Purposes."

Be it ordained by the City Council of the City of Cambridge, as follows:—

SECTION 1. An ordinance entitled "Construction, Maintenance and Inspection of Buildings" is hereby amended as hereinafter set forth. In interpreting and applying the provisions of this ordinance, they shall be held to be the minimum requirements adopted for the promo-

tion of the public health, safety, comfort, convenience and general welfare. It is not intended by this ordinance to repeal, abrogate, annul or in any way to impair or interfere with any existing provision of law or ordinance or any rules, regulations or permits previously adopted or issued or which shall be adopted or issued pursuant to law relating to the use of buildings or premises; nor is it intended by this ordinance to interfere with or abrogate or annul any easements, covenants or other agreements between parties; *provided, however,* that where this ordinance, imposes a greater restriction upon height of buildings or requires larger yards, courts, or other open spaces than is imposed or required by such existing provision of law or ordinance or by such rules, regulations or permits or by such assessments, covenants or agreements, the provisions of this ordinance shall control.

SECTION 2. In Section 1 of said ordinance add at the end a new paragraph:—

"In interpreting and applying the provisions of the ordinance they shall be held to be the minimum requirements adapted for the promotion of the public health, safety, comfort, convenience and general welfare." (?) In Section 2 for "Superintendent of Public Buildings," read "Superintendent of Buildings" (?)

SECTION 3. In Section 5, after "injustice" insert a new paragraph:

"Where there are practical difficulties or unnecessary hardships in the way of carrying out the strict letter of the provisions of Divisions 3, 4 and 6 of this ordinance, the Board of Appeal shall have power in a specific case to vary any such provision in harmony with its general purpose and intent, so that the public health, safety and general welfare may be secured and substantial justice done. Before taking any action authorized in this paragraph, the Superintendent of Buildings shall give public notice and hearing."

SECTION 4. In Section 6, after "See" in the first line, insert "Also," before the words "permits" in the second and fourth and fifth lines, respectively, insert in each case the word "additional."

SECTION 5. In Section 9, for "Dwellings" and its definition, substitute present section 177 as part of Section 9. In Section 9, in the definition of "Habitable Story," for the words after "occupied by," substitute "one or more families, except those in multiple dwellings of seven or more families occupied solely by the janitor and his family."

(Query: "Half story").

In Section 9, insert at the end of the definition of "rear yard," the words in Section 180 beginning "The depth of such yard," and ending—"or right of way."

SECTION 6. Change "Div. 3" to "Div. 7," and insert it before Section 19.

Renumber all succeeding sections.

SECTION 7. Omit "Div. 5." Insert the present Section 17 after Section 18.

SECTION 8. For Section 18, substitute: For the purposes of this ordinance, the City of Cambridge is hereby divided into four classes of building districts, designated Building Districts 1, 2, 3 and 4 respectively; as shown on the building district map which accompanies this ordinance and is hereby declared to be part thereof. The building districts designated on said map are hereby established. The building district map designations and map designation rules which accompany said building district map are hereby declared to be part thereof. No building or part of a building shall be erected except in conformity with the regulations herein prescribed for the district in which the building is located.

Throughout the present ordinance, for the words "district 2," wherever they occur, substitute "districts 2, 3 and 4."

SECTION 9. In the present Section 17, insert before the first word: "In building districts 1 and 2." Omit the word "except" after "in any case" and insert:

In building districts 3, no building or part thereof shall be erected to a height exceeding 1½ times the width of the widest street on which the building stands, measured from the face of any such part to the line of the street on the other side, nor exceeding 4 stories or 60 feet in any case.

In building districts 4, no building or part thereof shall be erected to a height exceeding the width of the widest street on which the building stands, measured from the face of any such part to the line of the street on the other side, nor exceeding 2½ stories or 40 feet in any case, provided that any building designed for and used exclusively as a private dwelling and distant not less than 30 feet from the farther side of the street on which it fronts may be erected to a height of three stories.

The provisions of this section shall not apply to—

SECTION 10. After the present section 17 (as transferred insert a new section as follows:

Section—On Streets less than 20 feet wide the same height regulations shall be applied as on 20 foot streets.

A corner building shall be governed by the height regulations provided for the wider street for 100 feet from the side of such wider street, measured at right angles to such side.

SECTION 11. Before present Section 19, insert "Division 5. ADDITIONAL SPACE REQUIREMENTS FOR DWELLINGS," and present Sections 179–184, 187, 188 and:

"Division 6—AREA REGULATIONS.

"SECTION—In building districts 1 and 2 any building may be erected so as to occupy such part of the lot on which it stands as is permitted by other sections of this ordinance, other ordinances, laws and regulations."

In building districts 3, no building may be erected so as to produce rear yards with less than the following minimum dimensions:

Height of Building other than a dwelling, in feet:	Height of dwelling in habitable stories	Depth of yard, in feet
10	1	15
20	2	15
30	2½	15
40	3	16
50	4	17
60	....	18

The depth of rear yard for a corner lot may be reduced to two-thirds the depth required for an interior lot for a length not exceeding 30 feet.

No yard shall be required behind a dwelling erected on a corner lot adjoining a lot less than 100 feet deep and running through from street to street or from a street to an alley or open passageway not less than 20 feet in width.

No yard shall be required behind a dwelling erected on a lot less than 100 feet deep and running through from street to street or from a street to an alley or open passageway not less than 20 feet in width.

If a dwelling is built on a lot with another dwelling and if the rear yard behind the rear dwelling does not have access directly to a street, there shall be a passageway not less than 20 feet wide leading from the yard between the two buildings directly to a street.

In building districts 3, no building may be erected so as to produce side yards with less than the following minimum dimensions:

Height of building other than dwelling, in feet:	Height of dwelling in habitable stories	Width of yard, in feet.
10	1	6
20	2	6
30	2½	7
40	3	8
50	4	9
60	..	10

If the length of the building measured along the side yard is in excess of 40 feet, then the width of the side yard noted above shall be increased one foot for every ten feet or portion thereof of such excess.

In building districts 3, outer courts shall be in accordance with the following table of minimum dimensions:

Height of building other than dwelling, in feet	Height of dwelling in habitable stories	Outer Court Between wings	Outer Court on lot line.
10	1	10	7
20	2	12	8
30	2½	14	9
40	3	16	10
50	4	18	11
60	..	20	12

If the length of an outer court is in excess of three times its required width, then the width shall be increased, for an outer court between wings by two feet for every ten feet thereof of such excess, and for an outer court on lot line by one foot for every ten feet of such excess.

In building districts 3, inner courts shall be in accordance with the following table of minimum widths and areas:

Height of building other than dwelling, in feet:	Height of dwelling in habitable stories:	Inner Court not on lot line:		Inner Court on lot line:	
		Width in ft.	Area sq. ft.	Width in. ft.	Area in sq. ft.
10	1	12	200	7	150
20	2	14	300	8	200
30	2½	16	400	9	250
40	3	18	500	10	300
50	4	20	600	11	350
60	..	22	700	12	400

In Building Districts 4, there shall be, except as otherwise provided, immediately behind every building in the rear of a lot a yard extending across the entire width of the building.

In building districts 4, no building may be erected so as to produce rear yards with less than the following minimum dimensions:

Height of building other than a dwelling, in feet:	Height of dwelling in habitable stories:	Depth of yard, in feet:
10	1	20
20	2	20
30	2½	20
40	3	22

The depth of rear yard for a corner lot may be reduced to three-fourths of the depth required for an interior lot for a length not exceeding thirty feet.

No yard shall be required behind a building erected on a corner lot adjoining a lot less than 50 feet deep and running through from street to street, or from street to an alley or open passageway not less than 20 feet in width.

No yard shall be required behind a building erected on a lot less than 50 feet deep and running through from street to street or from a street to an alley or open passageway not less than 20 feet in width.

If a building is built on a lot with another building, and if the rear yard behind the rear building does not have access directly to a street, there shall be a passageway not less than 30 feet wide leading from the yard between the two buildings directly to a street.

In building districts 4, there shall be on the same lot with every building a side yard whose width shall be in accordance with the following table of minimum dimensions:

Height of building other than a dwelling, in feet:	Height of dwelling in habitable stories:	Width of yard, in feet:
10	1	7
20	2	8
30	2½	9
40	3	10

In dwellings in building districts 4, every room, kitchenette, and alcove, except bath-rooms and water-closet compartments, shall have a window or windows of a total clear area of not less than 1-8 of the area of the room, so located as to light the room properly, opening upon a street or yard located upon the same lot and of the dimensions specified in this division.

Courts shall be in accordance with the minimum dimensions and areas required for buildings in districts 3.

SECTION 12. Insert after the foregoing new section, Section 178. In Section 178, change the words "dwelling" on the 12th, 13th and 14th lines, respectively, to "Building" in each case. Add at the end of Section 178:

The lowest level of a rear yard shall not be above the level of the adjoining ground.

(?) If a building is erected on the same lot with another building the several buildings shall, for the purpose of this article, be considered as a single building. Any structure, whether independent of or attached to a building, shall for the purposes of this article be deemed a building or a part of a building. (?)

SECTION 13. Before present Section 19, insert present Div. 3, which will include present Section 19 at its end.

SECTION 14. In Section 19, next to last line, after "story," substitute "if it comes under the definition of habitable story in Section 9."

(Throughout tables, change "District 2" to "Districts 2, 3, and 4.")

(Cf. Section 135, Projections.)

SECTION 15. Change Div. 30 to "Div. 29."

After present Section 205, insert present Division 7 as "Division 30."

After present Section 214, insert present Division 29 as "Division 32."

SECTION 16. Before present Section 215, insert: Section —— The City Council may from time to time, on its motion or on petition, after public notice and hearing, and after reference by it to the Planning Board for report, amend, supplement, or change the regulations and districts established in Divisions 3, 4, and 6 of this Ordinance.

Whenever the owners of 50 per cent or more of the frontage in any district or part thereof shall present a petition duly signed and acknowledged to the City Council requesting an amendment, supplement, change or repeal of the regulations prescribed for such district or part thereof, it shall be the duty of the City Council to

vote upon said petition within 90 days after the filing of the same by the petitioners with the City Clerk. If, however, a protest against such amendment, supplement or change be presented, duly signed and acknowledged by the owners of 20 per cent or more of any frontage proposed to be altered, or by the owners of 20 per cent of the frontage immediately in the rear thereof, or by the owners of 20 per cent of the frontage directly opposite the frontage proposed to be altered, such amendment shall not be passed except by the unanimous vote of the City Council. If any area is hereafter transferred to another district by a change in District boundaries by an amendment, as above provided, the provisions of this ordinance in regard to building or premises existing at the time of the passage of this ordinance shall apply to buildings or premises existing at the time of passage of such amendment in such transferred area.

SECTION 17. Nothing herein contained shall require any change in the plans or construction of a building for which a building permit has been heretofore issued, or plans for which are on file with the Superintendent of Buildings at the time of the passage of this ordinance, and a permit for the erection of which is issued within two months of the passage of this ordinance, and the construction of which, in either case, shall have been diligently prosecuted within six months of the date of such permit, and the ground story framework of which, including the second tier of beams, shall have been completed within such six months, and which entire building shall be completed according to such plans, as filed within two years from the date of the passage of this ordinance.

Nothing in this ordinance shall prevent the restoration of a building wholly or partly destroyed by fire, explosion, act of God or act of the public enemy. Nothing in this ordinance shall prevent the restoration of a wall declared unsafe by the Superintendent of Buildings.

SECTION 18. This ordinance shall take effect on its passage.

(Tentative Draft by Arthur C. Comey, Consultant, December 11, 1917. Matter with question marks subject to further study.)

(This Ordinance to follow Bulk Districting Ordinance.)

CITY OF CAMBRIDGE

In the year One Thousand Nine Hundred and Eighteen

AN ORDINANCE ENTITLED

"Restriction of the Location of Trades and Industries and the location of buildings designed for Specified Uses and Establishment of the Boundaries of Districts for the said Purposes."

Be it ordered by the City Council of the City of Cambridge, as follows:

Section 1. An Ordinance entitled "Construction, Maintenance and Inspection of Buildings" is hereby amended as hereinafter set forth. In interpreting and applying the provisions of this ordinance, they shall be held to be the minimum requirements adopted for the promotion of the public health, safety, comfort, convenience and general welfare. It is not intended by this ordinance to repeal, abrogate, annul or in any way to impair or interfere with any existing provision of law or ordinance or any rules, regulations or permits previously adopted or issued or which shall be adopted or issued pursuant to law relating to the use of buildings or premises; nor is it intended by this ordinance to interfere with or abrogate or annul any easements, covenants or other agreements between parties; provided, however, that where this resolution imposes a greater restriction upon the use of buildings or premises than is imposed or required by such existing provision of law or ordinance or by such rules, regulations or permits or by such easements, covenants or agreements, the provision of this resolution shall control.

Section 2. In Section 15, under "Residence Buildings" "D," strike out "Hotels"; insert "E. Hotels."

"F. Accessory buildings, not over two stories high, on same lot with a Residence Building A, including private stables and private garages accommodating not more than four private motor vehicles."

Under "Public Buildings," after C, insert "D. Churches." Change "D" and "E" to "E" and "F" respectively, and under the new "E" strike out "churches."

Under "Business Buildings" for C, substitute: "C. Storage Buildings and manufacturing buildings not used for ANY OF THE PURPOSES listed under D." After C insert: "D. Buildings used for any of the following trades, industries, or uses:

Ammonia, chlorine or bleaching powder manufacture.
Arsenals.
Asphalt manufacture or refining.
Assaying (other than gold or silver).
Blacksmithing or horseshoeing (?).
Boiler making. (E)
Brewing or distilling of liquors or spirits.
Brick manufacture.
Carpet cleaning.
Carriage and wagon manufacture (?).
Celluloid manufacture.
Cold storage (?).
Contractors' plants storage (?).
Crematory.
Disinfectant and insecticide manufacture.
Dyeing or dry cleaning.
Distillation of coal, wood, or bones.
Dyestuffs manufacture.
Electric central station power plant. (E)
Explosive manufacture of storage.
Fat rendering.
Fertilizer manufacture.
Flour and grain milling.
Gas (illuminating or heating) manufacture or storage.
Glue, size and gelatine manufacture.
Ice manufacture.
Incineration or reduction of garbage, offal, dead animals or refuse.
Iron, steel, brass or copper works or foundry. (E)
Junk, scrap paper or rag storage or baling.
Lamp black manufacture.
Leather and leather goods manufacture.
Lime, cement or plaster of Paris manufacture.
Lumber storage.
Milk bottling and distribution station.
Oil cloth or linoleum manufacture.
Paint, oil, varnish or turpentine manufacture.
Petroleum refining or storage.
Printing ink manufacture.
Raw hides or skins—storage, curing or tanning.
Rubber manufacture from the crude material.
Saw or planing mill.
Shoddy manufacture or wool scouring.
Slaughtering of animals.
Smelting.
Soap manufacture.
Starch, glucose or destrine manufacture.
Stock yards.

Stone or monumental works.
Sugar refining.
Sulphurous, sulphuric, nitric, or hydrochloric acid manufacture.
Tallow, grease or lard manufacturing or refining.
Tar distillation or manufacture.
Tar roofing or tar waterproofing manufacture.
Textile manufactures.

E. Foundries, light and power plants and other buildings not classified herein."

Change "D" and "E" to "F" and "G" respectively.

Under the new "F" insert before "stables" the word "public" and add "and garages including private garages accommodating more than four motor vehicles."

Under the new "G" strike out "foundries" and "light and power plants, other buildings not classified herein."

In the parenthesis, after "see" insert "also."

SECTION 3. In Section 16, after "B, C, D" insert "E or F." After "Class E" insert "or G."

SECTION 4. After Section 16 insert the following new sections, and renumber old sections from 17 to 216. "Section 17:

For the purpose of regulating and restricting the location of trades and industries and the location of buildings designed for specified uses, the City of Cambridge is hereby divided into three classes of use districts: (I) Residence districts, (II) Business districts, and (III) Unrestricted districts; as shown on the use district map which accompanies this ordinance and is hereby declared to be part hereof. The use districts designated on said map are hereby established. The use district map designations and map designation rules which accompany said use district map are hereby declared to be part thereof. No building or premises shall be erected or used for any purpose other than a purpose permitted in the use district in which such building or premises is located.

In a residence district no building shall be erected other than a building, with its usual accessories, arranged, intended or designed exclusively for one or more of the following classes of use, as defined in Section 15.

(1) Residence Buildings A, B, C, D, F.
(2) Public Buildings A, B, C, D.
(3) Business Buildings G.

In a residence district no building or premises shall be used for any use other than a use above specified, for which buildings may be erected and for the accessory uses customarily incident thereto. The term accessory use shall not include a business nor shall it include any building or use not located on the same lot with the building or use to which it is accessory.

(?) Where any portion of a residence district lies within the boundaries of a Building District 4 as defined in Section 18 (old number) no building in such portion of a residence district shall be used or erected which is arranged, intended or designed to be used for any one or more of the following classes of use as defined in Section 15.

(1) Residence Buildings B, C, D.

(2) Public Buildings A. (?)

In a business district no building or premises shall be used, and no building shall be erected which is arranged, intended, or designed to be used for any one or more of the following classes of use as defined in Section 15:

Business Buildings D and E.

In a business district no building or premises shall be used, and no building shall be erected, which is arranged, intended or designed to be used for any trade, industry or use that is noxious or offensive by reason of the emission of odor, dust, smoke, gas or noise; but car barns or places of amusement shall not be excluded.

(?) In a business district no building or premises shall be used, and no building shall be erected, which is arranged, intended or designed to be used for any kind of manufacturing, except that any kind of manufacturing not included within the prohibitions of the two foregoing paragraphs of this section may be carried on provided not more than space equal to the area of the lot is so used. The printing of a newspaper shall not be deemed manufacturing. No use permitted in a residence district by this section shall be excluded from a business district. (?)

In an unrestricted district a building may be erected or used for any purpose in conformity with the provisions of this ordinance, and other existing ordinances and laws and regulations.

Section 18. In any building or premises any lawful use existing therein at the time of the passage of this ordinance may be continued therein, although not conforming to the regulations of the use district in which it is maintained, or such use may be changed or converted or

extended throughout the building, provided, in either case, that no structural alterations, except as required by existing laws and ordinances, are made therein and no new building is erected; and provided that:

In a residence or business district no building or premises unless now devoted to a use that is by Section 17 prohibited in a business district shall be converted to such use.

No existing building designed, arranged, intended or devoted to a use not permitted by this ordinance in the district in which such use is located shall be enlarged, extended, reconstructed or structually altered, unless such use is changed to a use permitted in the district in which such building is located, except that such building may be reconstructed or structurally altered to an extent not greater than 50 per cent. of the value of the building, exclusive of foundations, for the purpose of continuing therein, without any extension thereof, a lawful use existing therein, at the time of the passage of this ordinance, and such use may be continued therein, although not conforming to the regulations of the use district in which it is maintained.

Section 19. The Board of Appeals may, in appropriate cases, after public notice and hearing, and subject to appropriate conditions and safeguards, determine and vary the application of the use district regulations herein established in harmony with their general purpose and intent as follows:

(a) Permit the extension of an existing building and the existing use thereof upon the lot occupied by such building at the time of the passage of this resolution or permit the erection of an additional building upon a lot occupied at the time of the passage of this resolution by a commercial or industrial establishment and which additional building is a part of such establishment;

(b) Where a use district boundary line divides a lot in a single ownership at the time of the passage of this resolution, permit a use authorized on either portion of such lot to extend to the entire lot, but not more than 25 feet beyond the boundary line of the district in which such use is authorized;

(c) Permit the extension of a building into a more restricted district under such conditions as will safeguard the character of the more restricted district;

(d) Permit in a residence district a central telephone exchange or any building or use in keeping with the uses expressly enumerated

in Section 17 as the purposes for which building or premises may be erected or used in a residence district.

SECTION 5. In Section 19, change headings as follows: (to conform to expansion of Section 15).

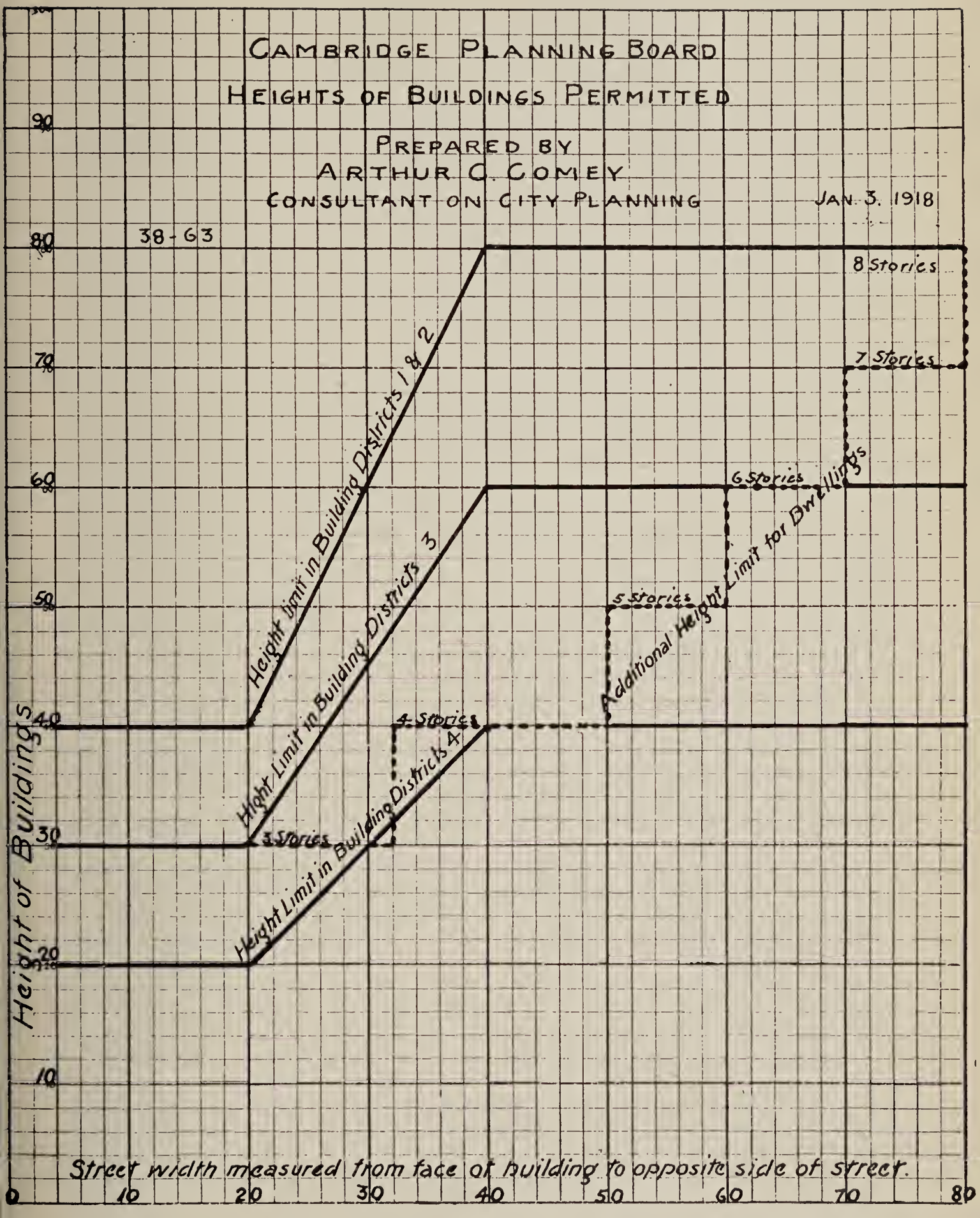
SECTION 6. In Section 173, at the end add "It shall be unlawful to use or permit the use of any building or premises or part thereof hereafter created, erected, changed or converted wholly or partly in its use or structure until a certificate of occupancy to the effect that the building or premises or the part thereof so created, erected, changed or converted and the proposed use thereof conform to the provision of this ordinance shall have been issued by the Superintendent. In the case of such buildings or premises it shall be the duty of the Superintendent to issue a certificate of occupancy within ten days after a request for the same shall be filed in his office by any owner of a building or premises affected by this ordinance, provided said building or premises, or the part thereof so created, erected, changed or converted, and the proposed use thereof, conforms with all the requirements herein set forth. Under rules and regulations of the Superintendent a temporary certificate of occupancy for a part of a building may be issued by him. Upon written request from the owner, the Superintendent shall issue a certificate of occupancy for any building or premises existing at the time of the passage of this resolution certifying after inspection the use of the building or premises and whether such use conforms to the provisions of this ordinance."

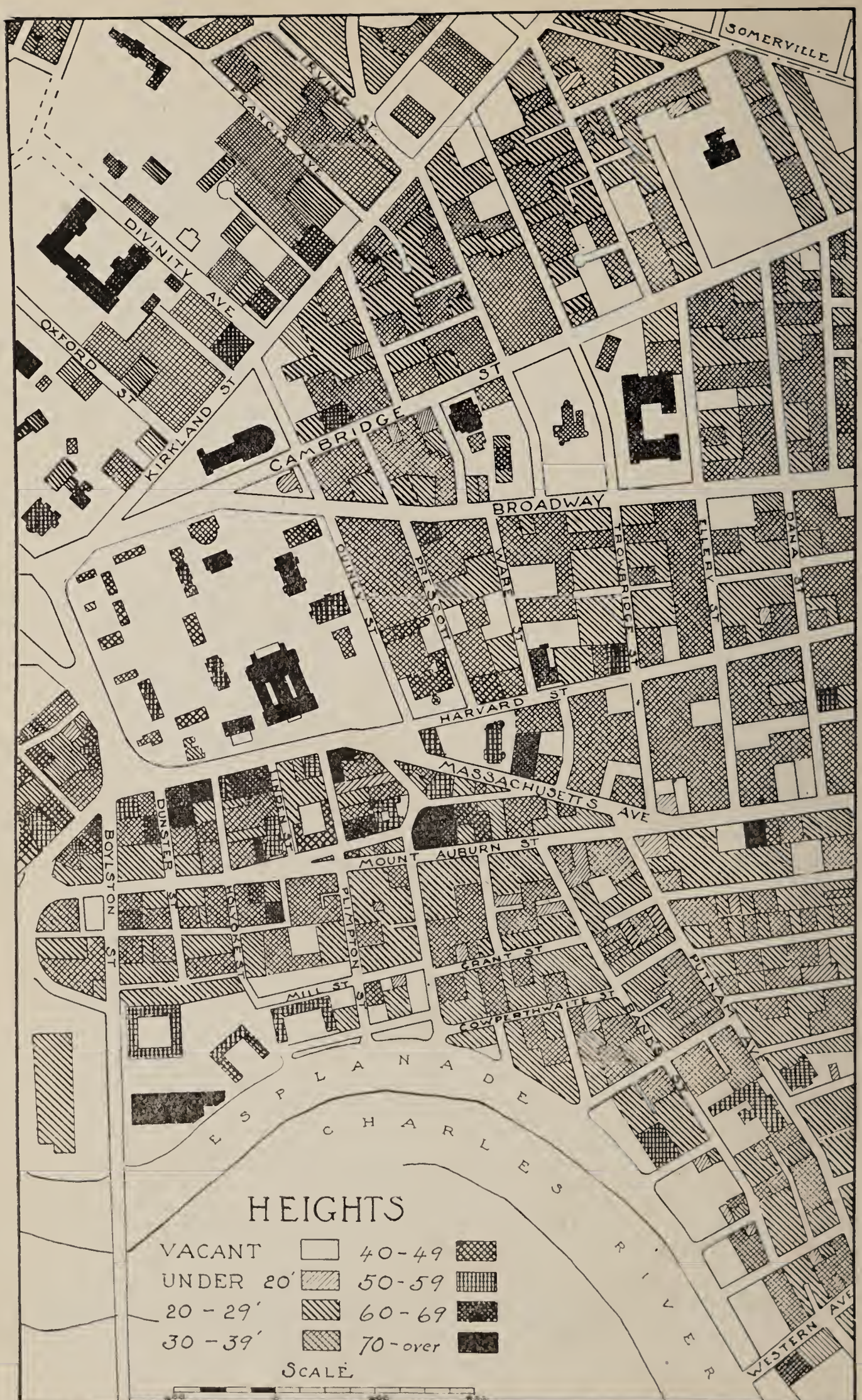
In Section 176, 6th line, after "therefor" strike out "said permit shall be void and."

SECTION 7. Nothing herein contained shall require any change in the plans, construction or designated use of a building for which a building permit has been heretofore issued, or plans for which are on file with the Superintendent at the time of the passage of this ordinance, and a permit for the erection of which is issued within two months of the passage of this ordinance and the construction of which, in either case, shall have been diligently prosecuted within six months of the date of such permit, and the ground story framework of which, including the second tier of beams, shall have been completed within such six months, and which entire building shall be completed according to such plans as filed within two years from the date of the passage of this ordinance.

Nothing in this ordinance shall prevent the restoration of a building, wholly or partly destroyed by fire, explosion, act of God or act of the public enemy, or prevent the continuance of the use of such building or part thereof as such use existed at the time of such destruction of such building or part thereof, or prevent a change of such existing use under the limitations provided in Section 4. Nothing in this ordinance shall prevent the restoration of a wall declared unsafe by the Superintendent of Buildings.

SECTION 8. This ordinance shall take effect on its passage.


CAMBRIDGE PLANNING BOARD
HEIGHTS OF BUILDINGS PERMITTED
PREPARED BY
ARTHUR C. COMEY
CONSULTANT ON CITY PLANNING
JAN. 3. 1918
38-63
8 Stories
7 Stories
6 Stories
5 Stories
4 Stories
3 Stories
Height limit in Building Districts 1 & 2
Hight Limit in Building Districts 3
Height Limit in Building Districts 4
Additional Height Limit for Bw'Ellings
Height of Buildings
90
80
70
60
50
40
30
20
10
Street width measured from face of building to opposite side of street.
0
10
20
30
40
50
60
70
80

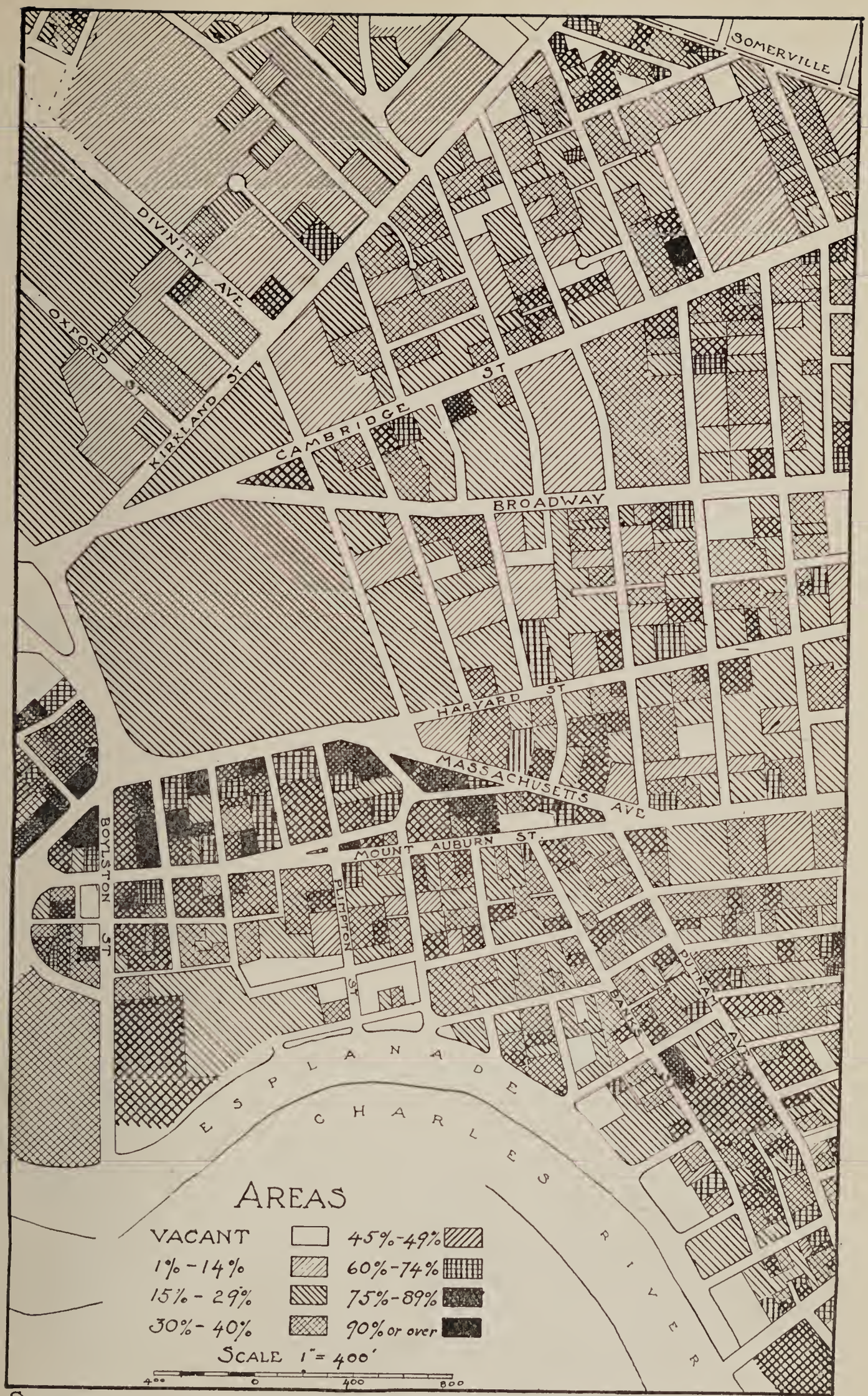


SECTION OF MAP SHOWING HEIGHTS OF BUILDINGS

38 - 68

A C C

1 - 23 - 20



SECTION OF MAP SHOWING PROPORTION OF LOTS COVERED.

38 - 69

A.C.C.

1 - 30 - 20

Cambridge, Massachusetts, March 6th, 1920.

To His Honor, the Mayor, and the City Council:

Harvard Square is a dangerous place for pedestrians; it is becoming inconvenient for vehicles; little increase in surface street car service would be possible; and underground the conditions on the northern loading platform at the rush hour have been for some time little short of criminal.

No one phase of the traffic problems of the square can safely be studied alone, with a view to remedying conditions, for a solution of any one problem may be very serious in its incidental effect on some other type of traffic. For example, the recently developed scheme of routing outbound Arlington cars during the rush hours over the surface relieves congestion in the subway, but at the same time much increases the danger to pedestrians and inconvenience to vehicles, not to mention difficulties of car operation on the surface.

On the other hand, the Planning Board has not felt that reliance should be placed on distant improvements, but rather that relief of conditions in Harvard Square should be sought by changes in the square itself and in its immediate vicinity.

Small changes will not effect great improvement. But the fact that unless changes are made conditions will grow steadily worse leads the Board to recommend strongly that some improvements be made at once, and that a scheme of improvements be followed that will ultimately entirely solve the traffic difficulties in the square.

The attached report of the Board's consultant indicates briefly the nature of and reasons for such a series of changes, both in the regulation of traffic and in the physical plan of Harvard Square. It is confined strictly to the traffic problem and only touches on those changes found necessary effectively to relieve traffic conditions.

The Planning Board urgently recommends that the following steps be taken at once, in conformity with the appended plans:

1. Mark pedestrian crossings by white paint and place signs warning drivers of vehicles to go slowly (Plans Nos. 2 and 5).

2. Require vehicles going north from Brattle, Mt. Auburn or Boylston street to enter the square by Dunster street, thus eliminating the left-hand turn.

3. Remove the sidewalk along the Common on the west side of Massachusetts avenue only.

4. Widen Peabody street on its west side and Cambridge street on its north side and require all north-bound Massachusetts avenue vehicles to follow these streets (Plan No. 6).

5. Lengthen the northern subway loading platform.

Respectfully submitted,

CAMBRIDGE PLANNING BOARD,

By Wm. Fenwick Harris, *Chairman.*

IMPROVEMENT OF TRAFFIC CONDITIONS IN HARVARD SQUARE, CAMBRIDGE, MASSACHUSETTS

REPORT TO THE CAMBRIDGE PLANNING BOARD

By Arthur C. Comey,

Consultant on City Planning, February 24th, 1920.

Traffic in Harvard Square may be divided into four classes, each with more or less conflicting interests:

A. Surface
   I. Pedestrians
   II. Vehicles
   III. Street cars
B. Underground
   IV. Subway

Present conditions are indicated by Plan No. 1, showing location of buildings, street lines, curbs, tracks, and by bands the flow of vehicular traffic as now regulated.

I. PEDESTRIANS

Danger and inconvenience to pedestrians is today the most serious problem in Harvard Square. This is due, first, to the indeterminate movements of vehicles, and second to the frequency of vehicles moving at relatively high speed.

Crossing the square by pedestrians may be made safer if the authorities

(1) Mark crossings at right angles to curbs on pavement by white paint, requiring pedestrians to keep to them and notifying vehicles by signs to "GO SLOWLY AT PEDESTRIAN CROSSINGS," with heavy penalties to drivers for accidents to pedestrians on crossings caused by speeding. See Plan No. 2.

(2) Make safety area in center of the square more definite by more posts (these are probably preferable to a curb and platform). See Plan No. 2.

(3) Nos. 1 and 2 may advantageously be combined. See Plan No. 2.

(4) Extend safety area in center and include narrow safety areas on outside of car tracks. Along south side of the square this involves moving tracks out to about 26 feet from curb. See Plan No. 3.

(5) Nos. 1 and 4 may advantageously be combined. See Plan No. 3.

More drastic regulation of vehicular traffic would benefit pedestrians still more, but would in most cases bring other dangers and inconveniences. Thus, diverting of traffic from Harvard Square would drive it upon narrower streets less able to handle it and would tend to produce dangerous crossings elsewhere farther from the traffic policeman.

Extensive street changes at more or less remote points would undoubtedly benefit Harvard Square traffic conditions, but are considered outside the scope of this report.

If a second traffic policeman can be stationed in the square, however—as will have to be done eventually as traffic develops—both vehicles and pedestrians will be benefited if authorities

(6) Eliminate left-hand turns for vehicles, except for those coming south on Massachusetts Avenue and continuing east on it. Vehicles going from Brattle, Mt. Auburn, or Boylston Streets north on Massachusetts Avenue or Peabody Street would have to come north on Dunster Street, which would be made a one-way street, crossing east-bound Massachusetts Avenue traffic at right angles under the direction of the second traffic policeman. Pedestrians could at the same time cross in safety. Vehicles coming west on Massachusetts Avenue going to Brattle, Mt. Auburn or Boylston Streets would have to come west on Mt. Auburn Street from Putnam Square, as many now do; or those for Brattle or Mt. Auburn Streets might go, as some now do, out Garden and Mason Streets. Local Brattle Street traffic would go through Church Street, which might be a one-way street and should be widened, in any event. See Plan No. 4.

At the north end of Harvard Square, pedestrian crossings from Garden and Church Streets to Harvard University may be made safer if authorities

(7) Mark pedestrian crossings on pavement in white, with the same rules as under No. 1 and install several traffic posts. See Plan No. 5.

(8) Regulate vehicular traffic as described under Vehicles No. 6.

II. VEHICLES

Vehicular traffic is not seriously endangered or inconvenienced in Harvard Square at present. It would, however, be made more convenient if authorities

(1) Move tracks on south side out to about 26 feet from curb, as recommended under Pedestrians No. 4.

Vehicular traffic would be made safer if authorities

(2) Make left-hand turns sharper and farther from center.

(3) Nos. 1 and 2 would each be helped by the other, as contemplated under Pedestrians No. 4. See Plan No. 3.

(4) If a second traffic policeman can be stationed in the square the elimination of left-hand turns as recommended under Pedestrians No. 6 would be a benefit.

Outside Harvard Square proper, vehicular traffic will benefit if authorities

(5) Widen Massachusetts Avenue, the back-bone of Cambridge, to a uniform width of about 86 feet between property lines. North of the square, the only change needed is from Garden Street to Waterhouse Street, including the removal of the sidewalks along the two commons and placing them inside the fence, and rounding off the corner of Garden Street and Massachusetts Avenue some ten feet. The widening on the larger common is shown on a plan in the Planning Board's file, and we understand will be carried out soon with funds from the government's payment to Cambridge for damage done to the Common during the war.

(6) As an alternative to widening along the smaller, eastern common, require traffic north bound to proceed from Harvard Square via Peabody and Cambridge Streets, the latter widened on its northeast side some ten feet, and the curb at the corner of Massachusetts Avenue and Holmes Place still further rounded off. This would obviate the present long diagonal crossings of vehicular and street car traffic on Massachusetts Avenue. Peabody Street would then, however, need to be widened some ten feet on its west side to accommodate its present south-bound traffic, which could not well be eliminated, a desirable im-

provement in any case, as even now it is a danger point. See Plan No. 6.

III. STREET CARS

There appear to be no serious difficulties in street car movements on the surface on the present schedules. Loading and unloading would be made more convenient and safer if authorities

(1) Extend the safety area in the center and include narrow safety areas along the car tracks, as recommended under Pedestrians Nos. 4 and 6.

(2) If additional loading facilities underground are provided, viaduct cars might be run through the subway, as suggested under Subway No. 4.

(3) If additional facilities are not provided underground, facilities on the surface can be increased by installing a curve, permitting cars going north from the square to load from two tracks, one on either side of the subway entrance. See Plan No. 7. However, any increase in the number of cars operated through the square on the surface will interfere with proper movement of vehicles, unless cars are operated on the loop system, coming south on Massachusetts Avenue, and returning instead of going out Brattle Street, and even in that case the interference and danger to pedestrians would be much increased.

(4) If a line should ever be built from Allston it should come through Eliot Street and either go through the square in the subway, or on the surface as part of a through route, thus avoiding additional car movements.

IV. SUBWAY

Train movements through the square appear to be unimpeded. Conditions at the western transfer for surface cars are reasonably good, but at the northern transfer they are congested at rush hours.

a. Some slight temporary relief will probably result if authorities

(1) Install a visible system of announcing car berths.

(2) Also establish customary berths for cars: 1, Arlington Heights; 3, North Cambridge; 5, Huron Avenue; 2 and 4 for either of adjacent routes. This involves dispatching cars into subway at Mt. Auburn Street, with a block signal system operated by a man in a tower. Absolute regularity would not be attempted, but cars would be sent in in a more ordered fashion than at present, when frequently so many of one line go through that several are empty or nearly so, while

those of other routes are badly overcrowded. Relief of congestion from this change would be slight, but it would also prevent running about and attempting to board cars at the unloading platform. The latter practice should be broken up at once in any case.

b. Permanent relief will result if authorities

(2) Develop transit in metropolitan Boston, unifying all rails in single system, and electrifying several steam lines for frequent passenger service, with free transfers to all other lines, including Fitchburg Division, Central Massachusetts or Lexington Branch, these to be connected to existing or new tunnels with several stations in Boston central district, thus diverting bulk of commuting traffic on Massachusetts Avenue at Porter Square or farther out yet. As an alternative the present subway may be extended to Porter Square, but this would be more costly and a less far-reaching solution. This was discussed at length in a report I previously submitted. Incidentally, whatever the development of metropolitan transit, a zone system of fares, say on a five cents per zone basis, would stabilize travel though it might not reduce it. At present Cambridge riders pay part of the cost of transporting Arlington riders to Boston, and furthermore, Cambridge taxpayers, in making up the "El" deficit, are enriching Arlington taxpayers, whose land is more valuable by reason of the uniform fare.

c. In the interim, relief will result if authorities

(3) Lengthen and widen the loading platform, extending it 100 feet north.

(4) No. 3 may be coupled with installation of visible system of announcing car berths and establishment of customary berths for cars: 1, 2, Arlington Heights; 4, 5, North Cambridge; 7, Huron Avenue, as recommended in No. 1.

(5) Construct underground terminal for Arlington cars at Harvard Square. A loop, though involving a grade crossing underground, would probably be the best from an operating standpoint, though the most expensive to install. A cheaper solution would be a stub terminal, either alongside the train platform, still using a grade crossing, or between the two through surface car tracks. See Map No. 8. Cars would be operated singly during the day. On the stub terminal during rush hours cars would be operated in threes—preferably a car with a trailer followed by a single car, as three-car trains are rather long for surface operation on streets without center reservations. On the return trip the trailer would be coupled to the other car, and leave first.

The plan as shown has the advantage that it could readily be constructed with very little interference with full use of subway meanwhile.

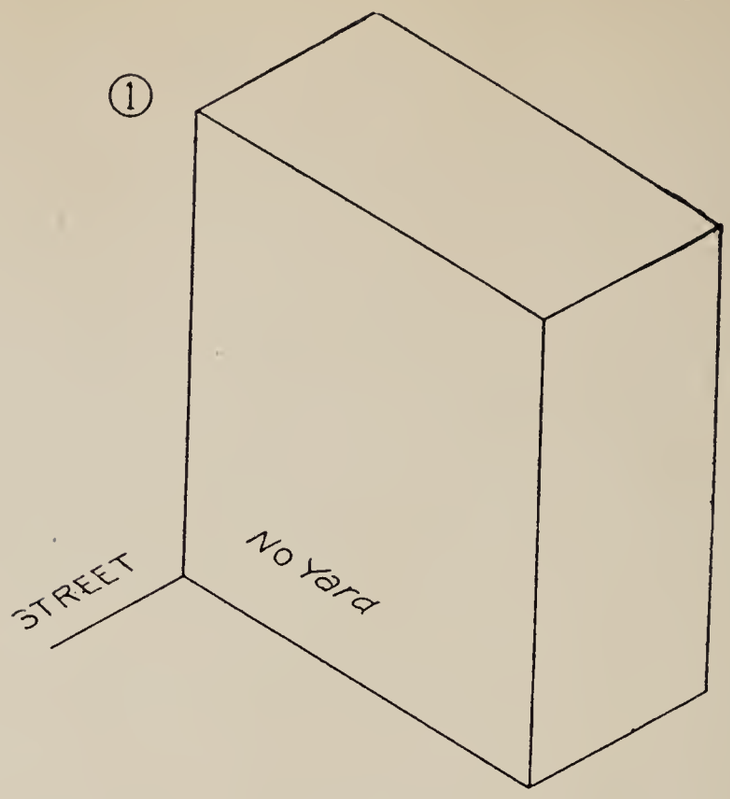
This relief of present trackage would permit Viaduct cars to be operated through the present subway if desired, with a short bit of new track from the northern portal to Cambridge Street.

Any of these schemes is preferable to routing some of the cars on the surface, as discussed under street cars, No. 3, though of course much more expensive to install.

DIAGRAMS SHOWING PROPORTIONS
OF LOTS WHICH MAY BE COVERED
UNDER PRESENT BUILDING CODE
(NUMBERS 1-30)
and in
DISTRICTS 3 AND 4
OF PROPOSED ZONING ORDINANCE
(NUMBERS 31-59)

DISTRICTS 1 AND 2, NOS 1-30

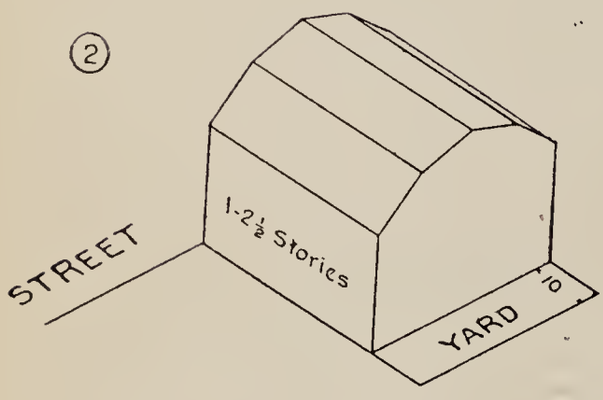
A Buildings other than Dwellings

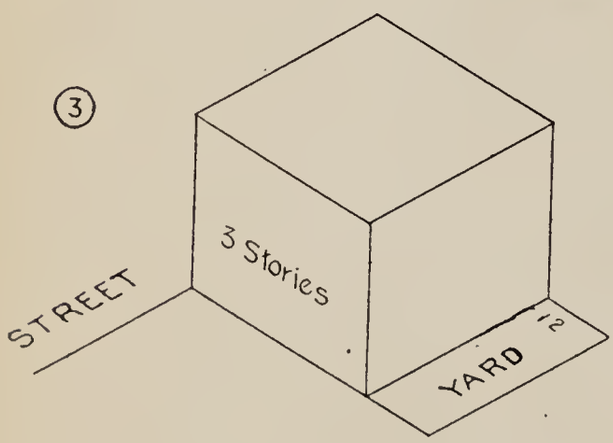


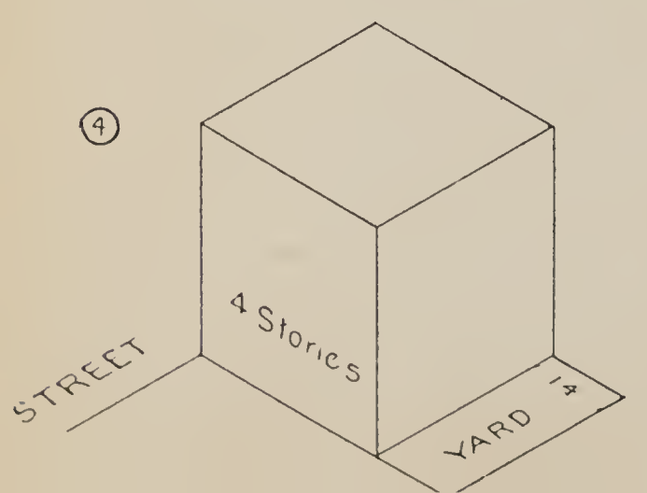
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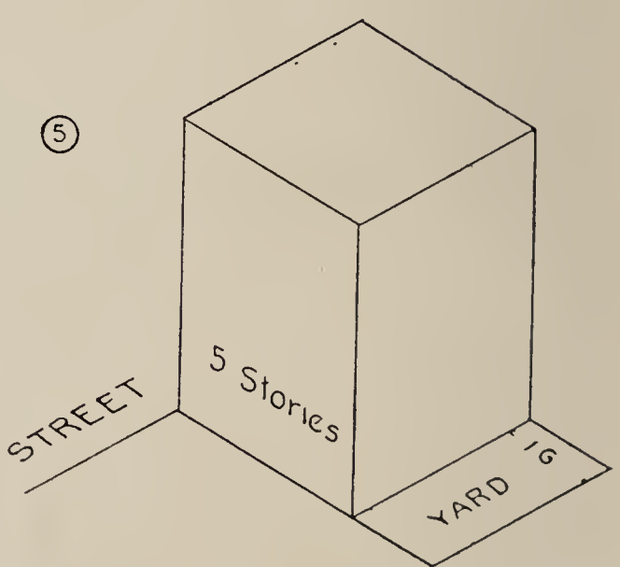
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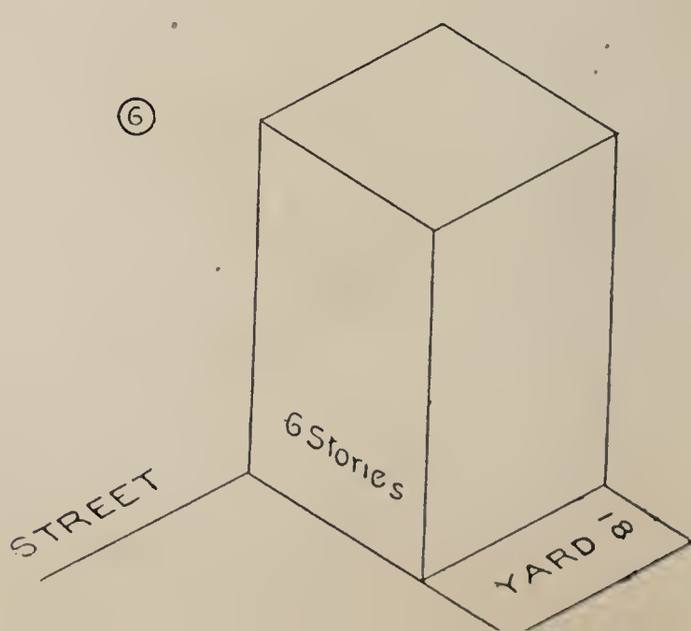
1 Interior Lots



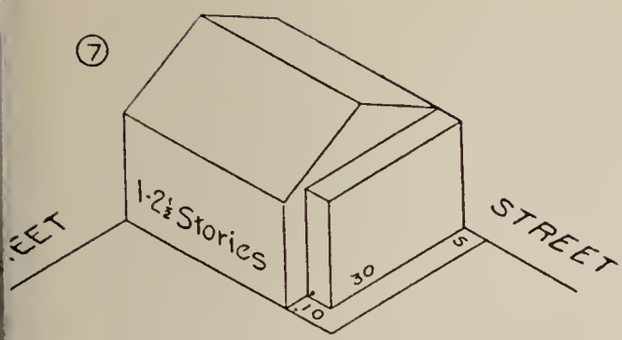


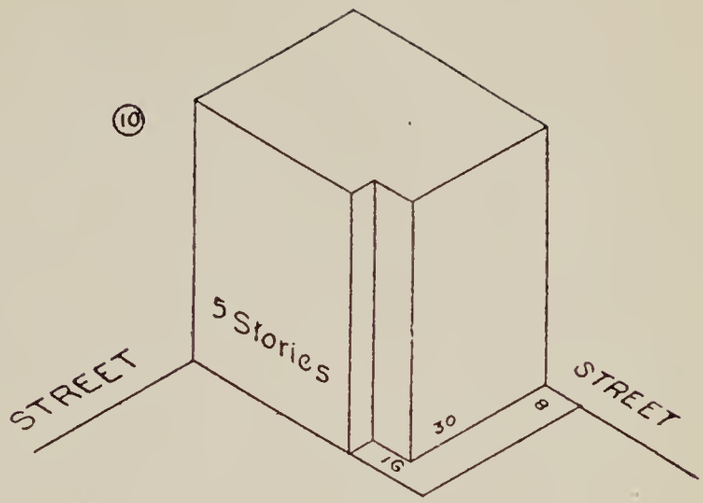


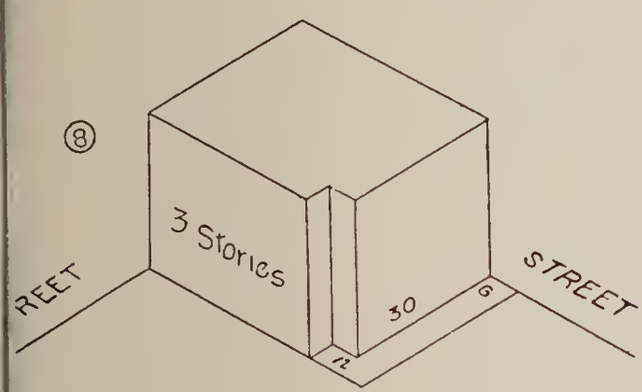


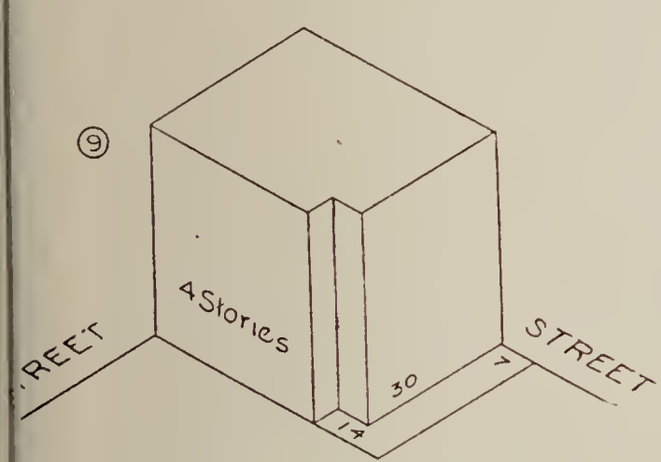


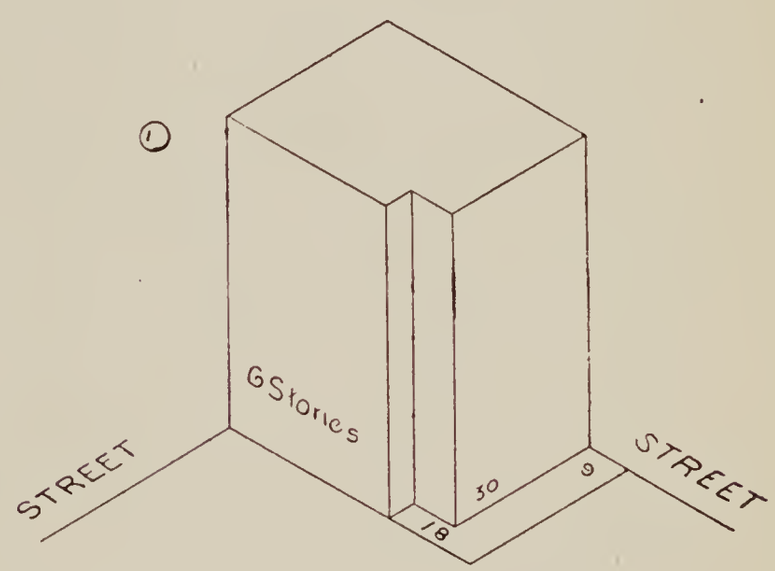
B-I-2 Corner Lots



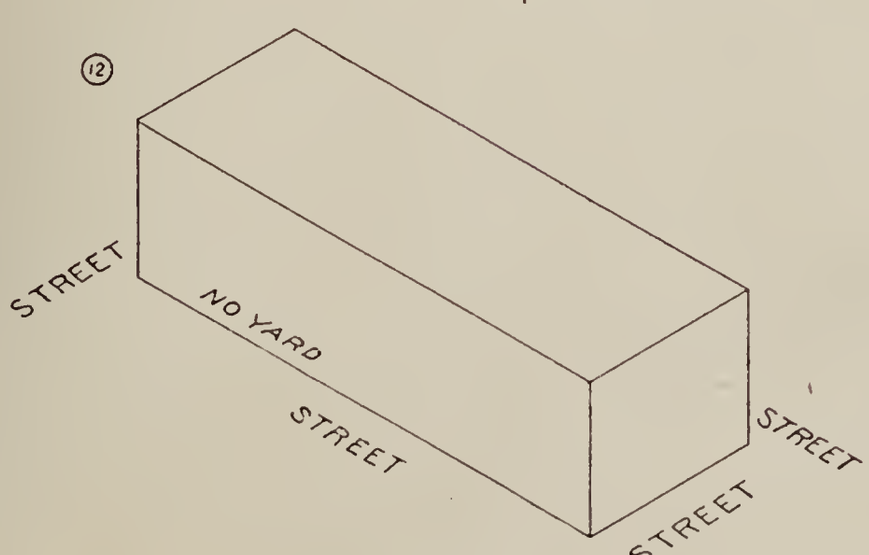




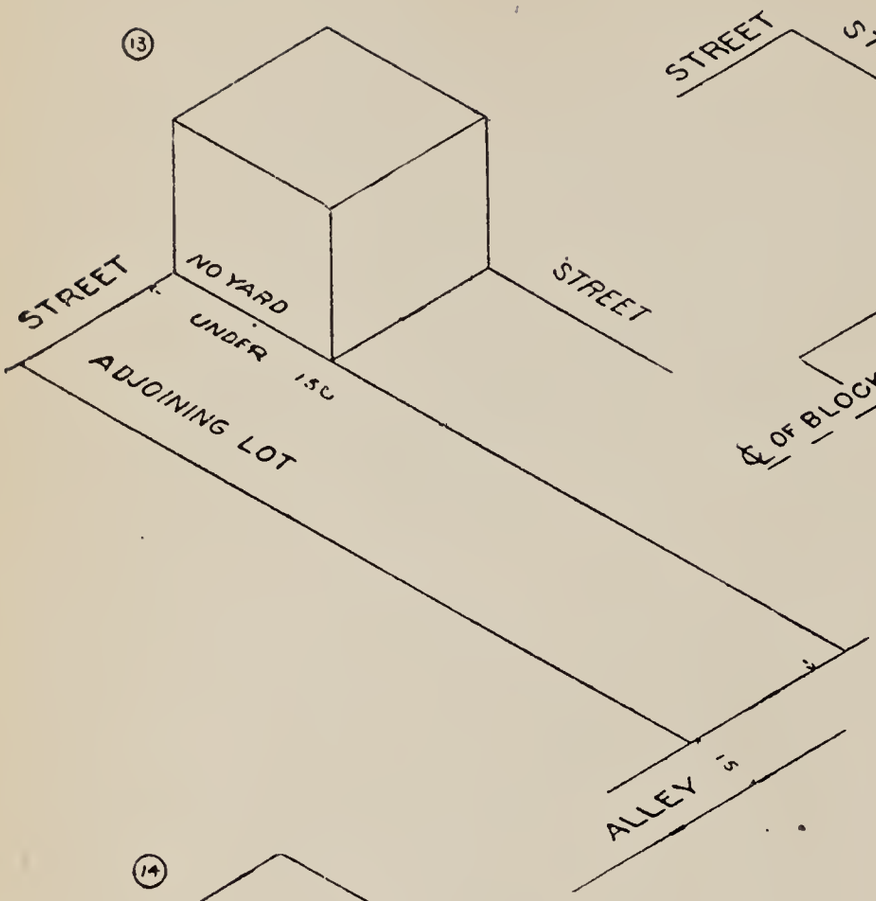


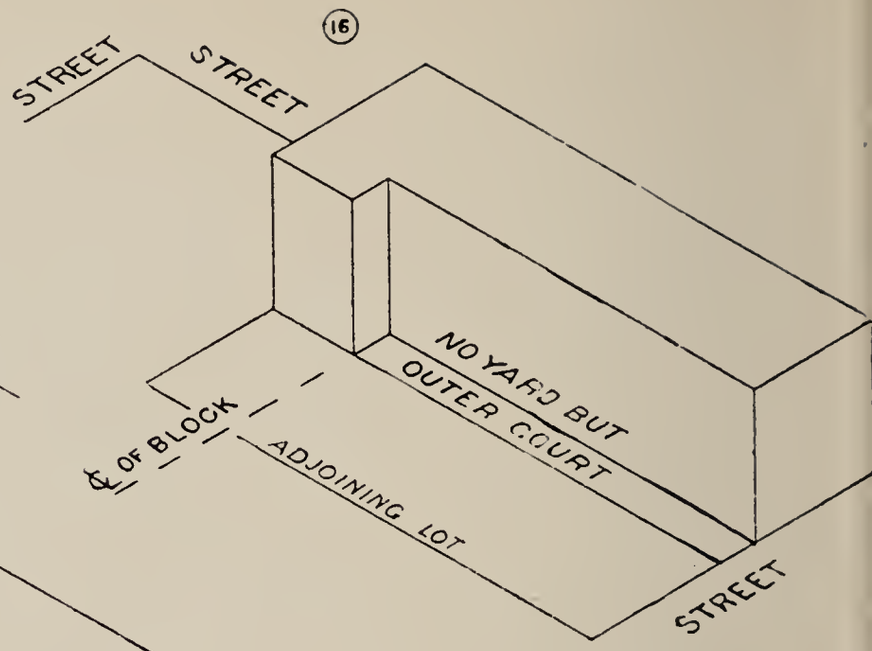


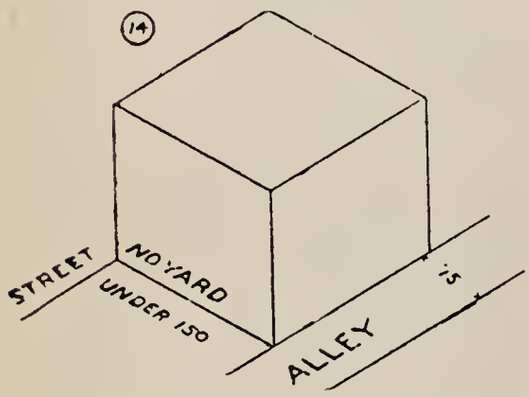
B I-3 Bounded by streets etc on all sides

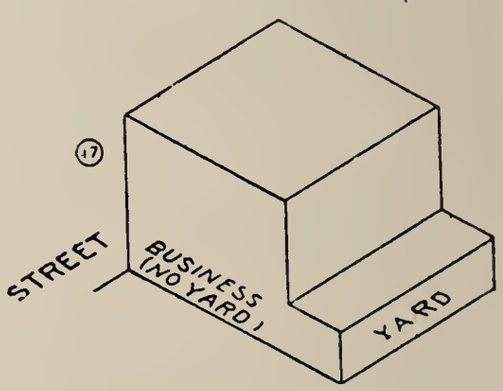


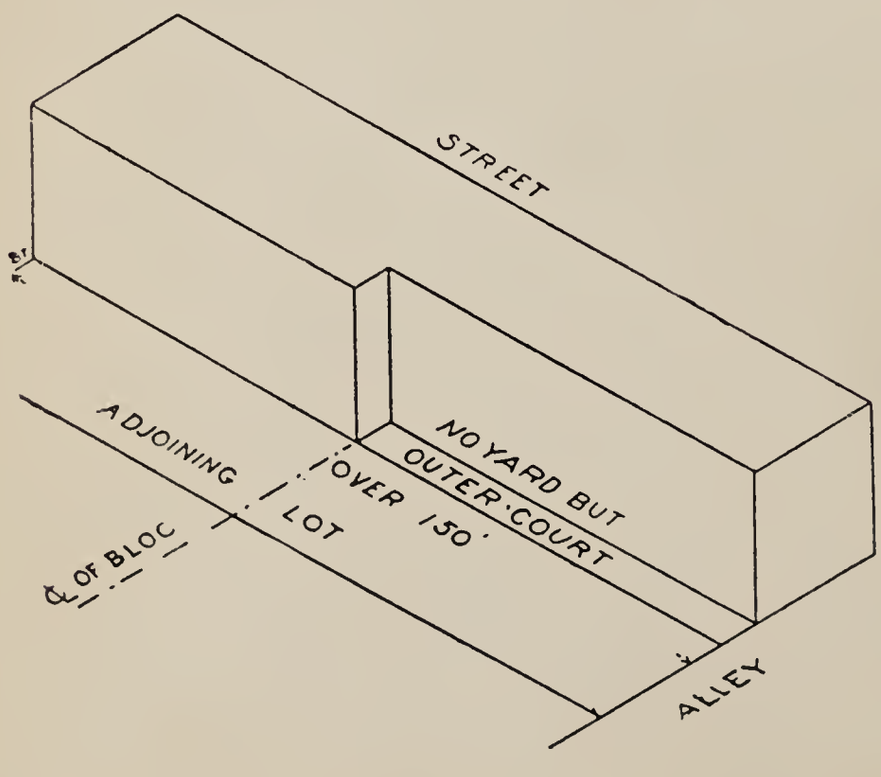
B'I-4 Exceptions



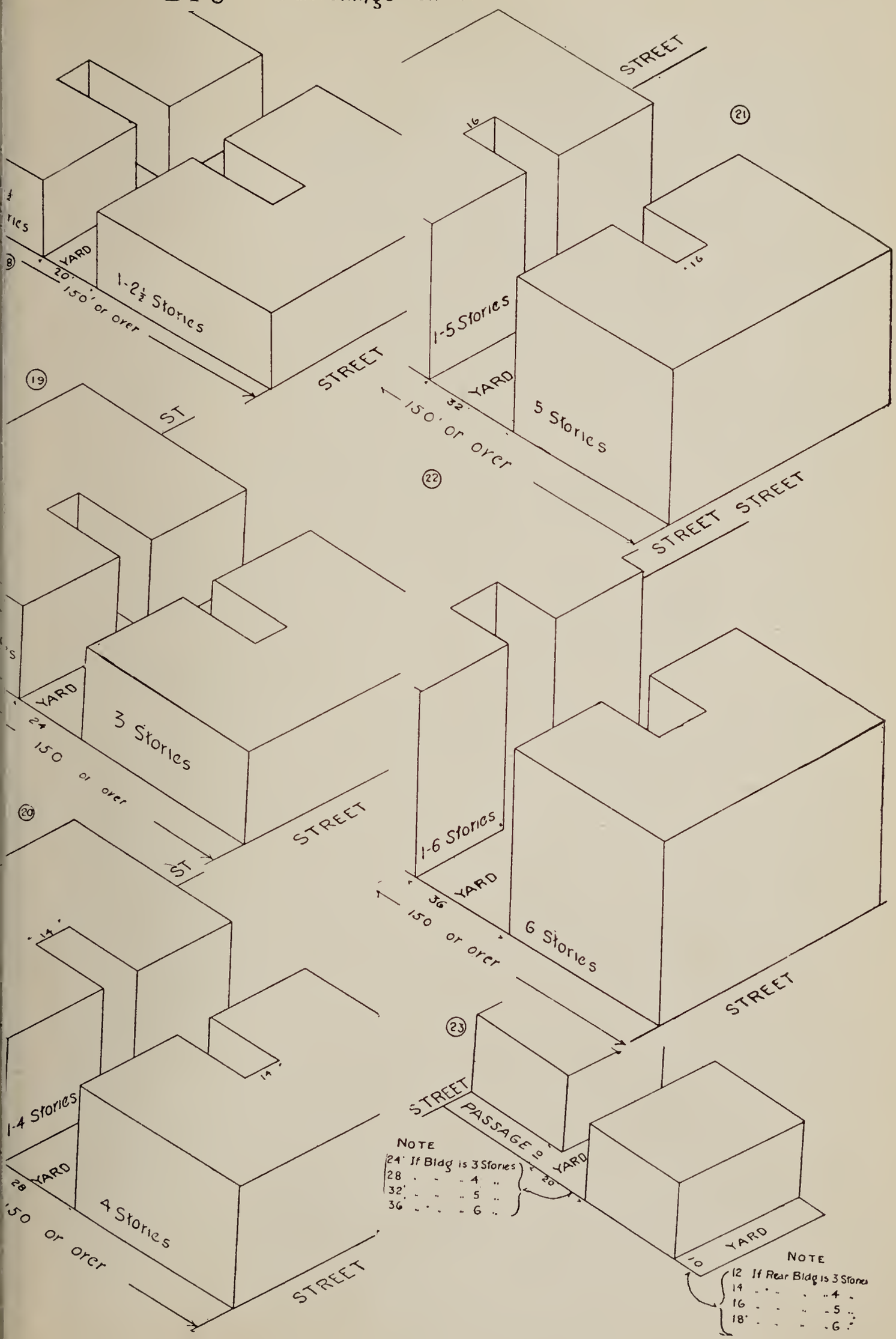








B I-5 Two dwellings on lot

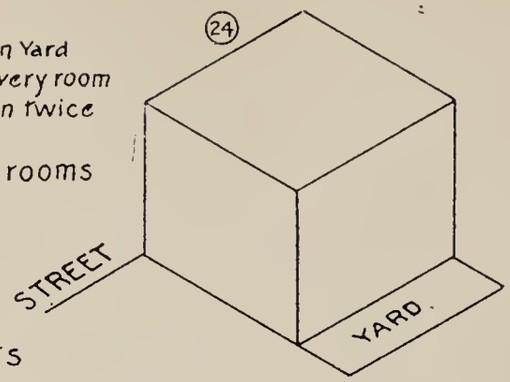


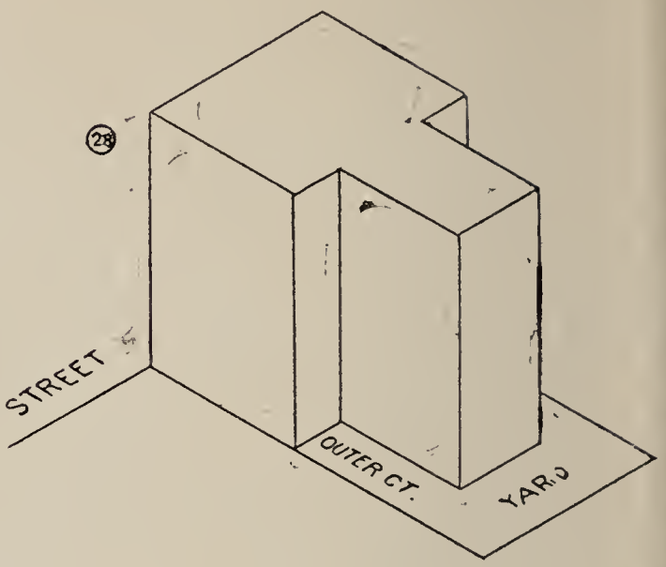
B II Side Yards and Courts needed to light rooms.

NOTE: One window on Yard or Court required in every room
No Room more than twice as long as wide

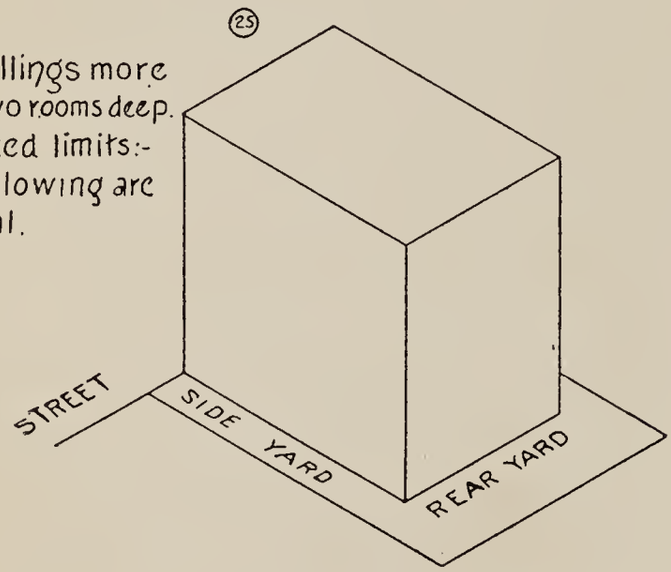
A Dwellings two rooms deep.

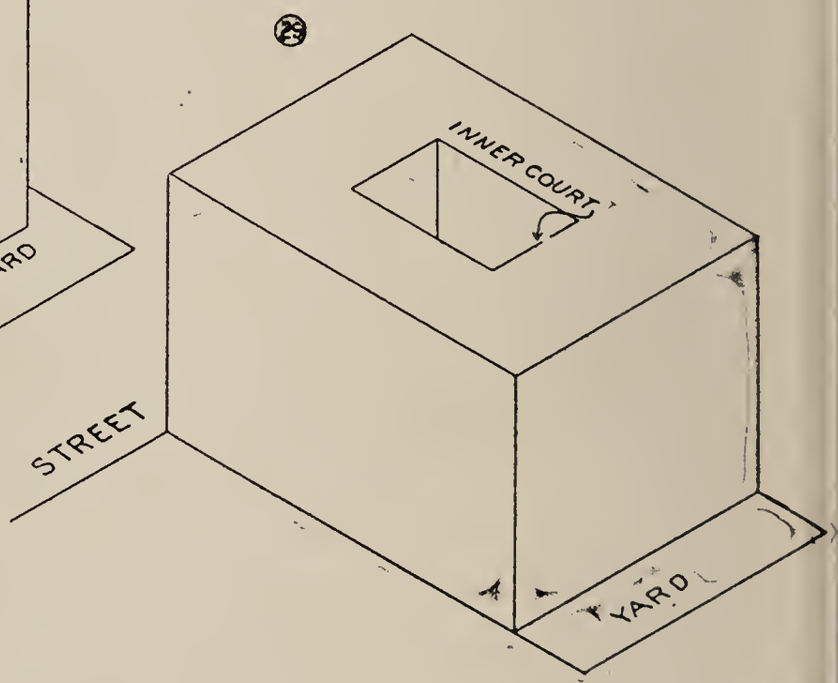
1 Interior Lots
2 Corner Lots, exceptions etc (as shown in I·9, q v.)

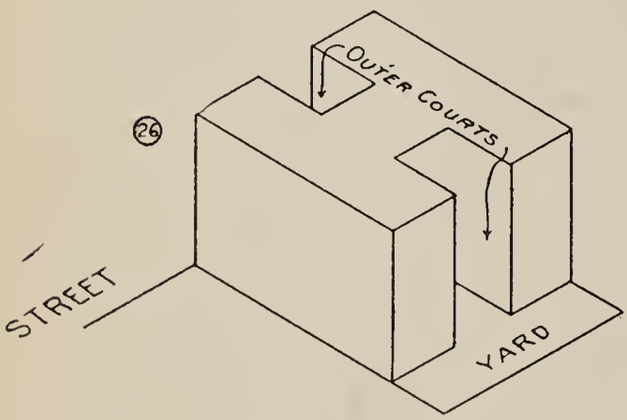


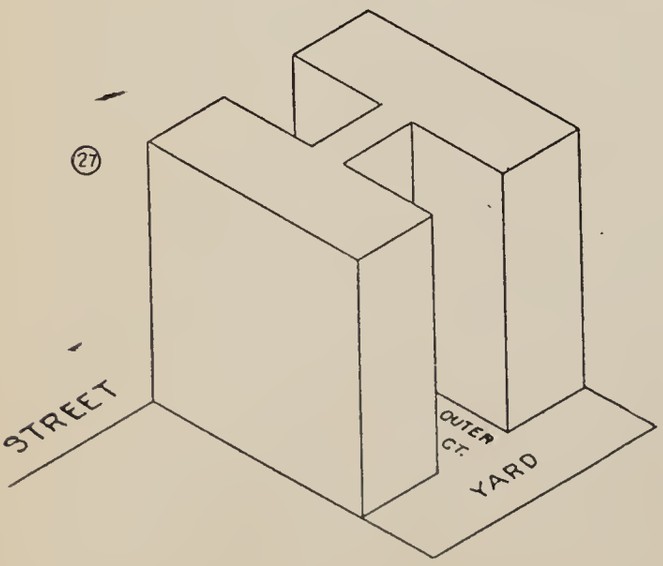


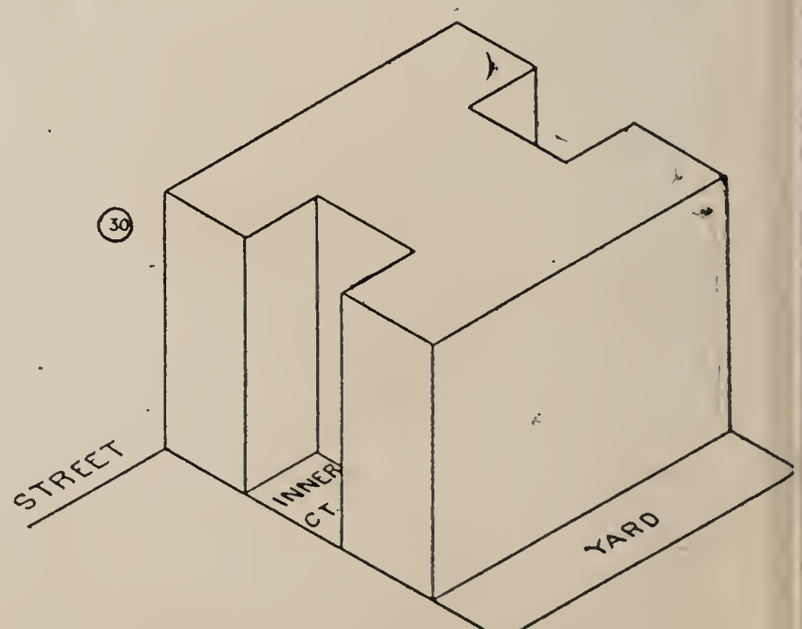
B Dwellings more than two rooms deep.
No fixed limits:- the following are typical.





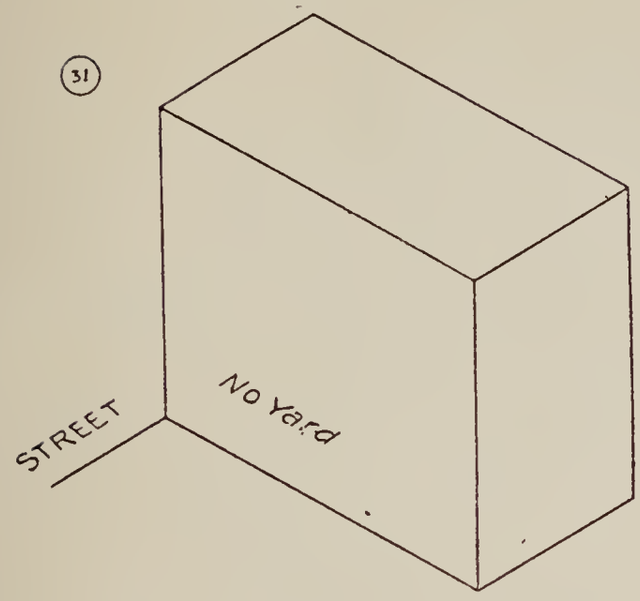






Districts 3 Nos. 31-47

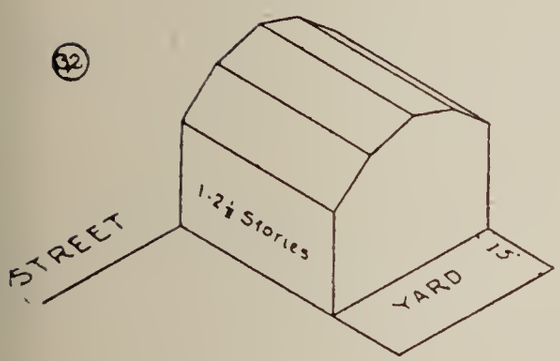
A Buildings other than Dwellings

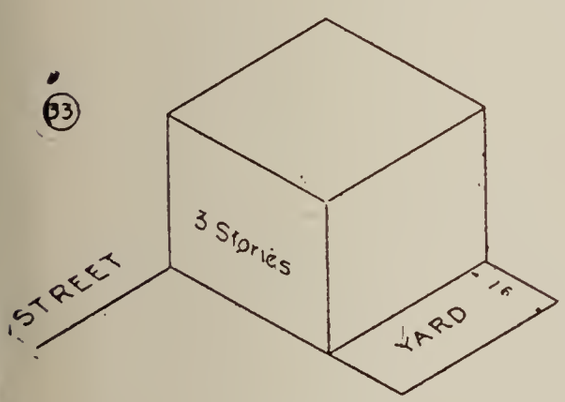


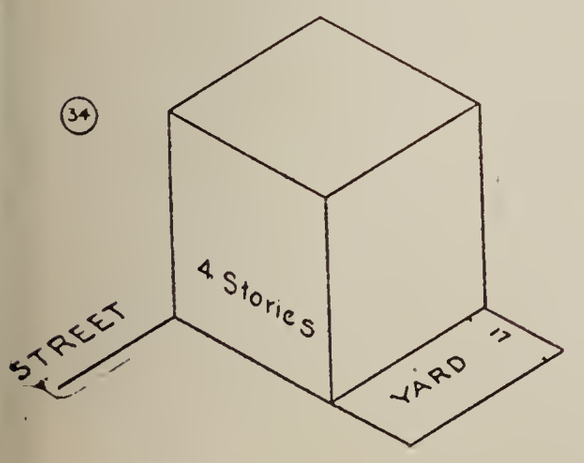
B Dwellings

I Rear Yards absolutely required

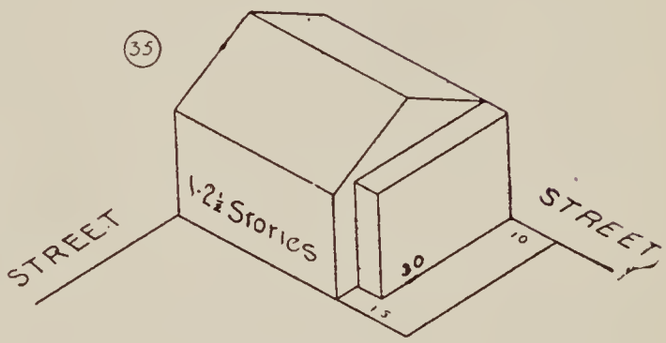
1 Interior Lots

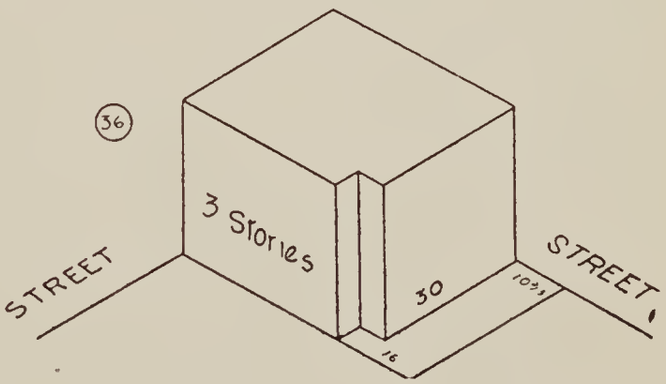


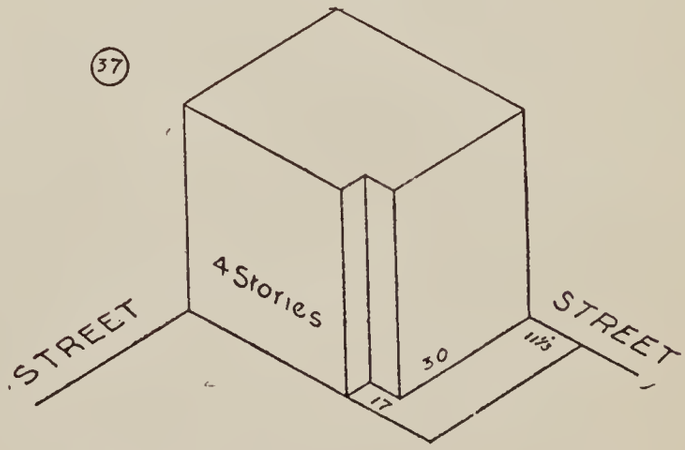




2 Corner Lots

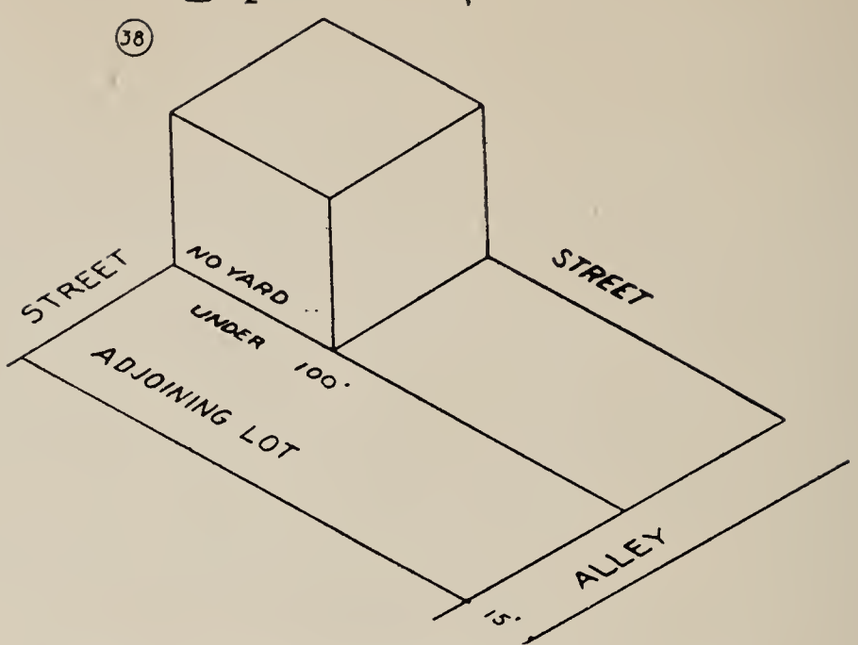




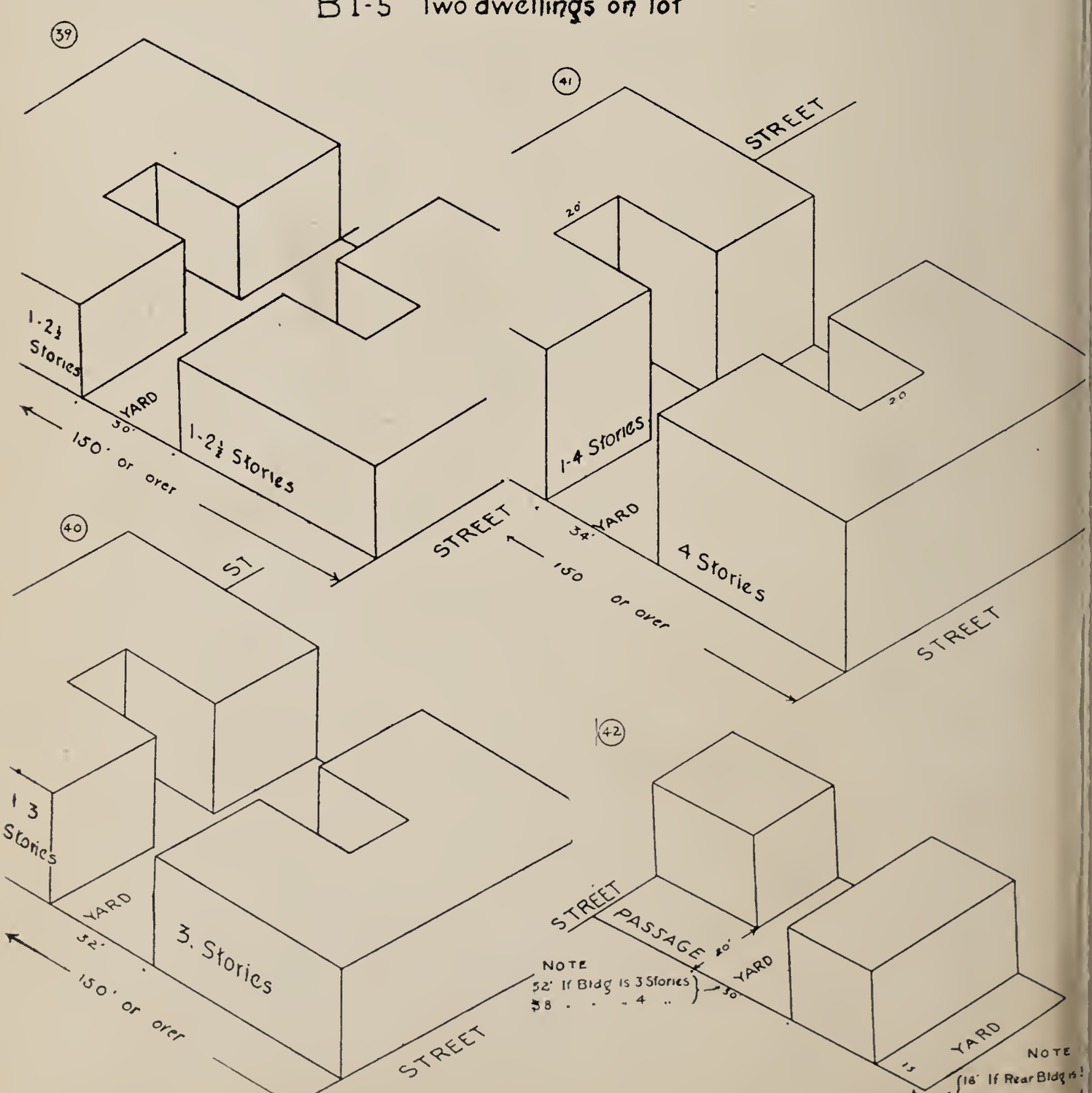


B 1-3 Bounded by streets on all sides
same as in Districts 1 and 2, compare (12)

B I 4c Exceptions



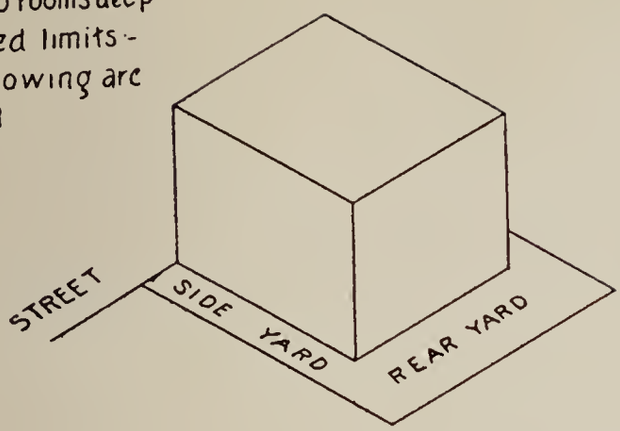
B I-5 Two dwellings on lot



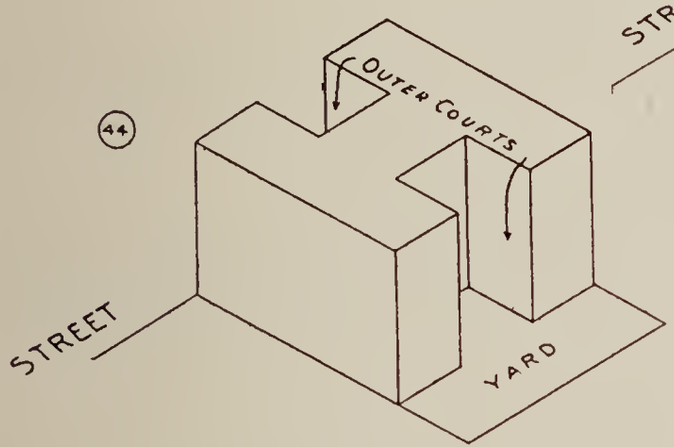
B-II

B Dwellings more than two rooms deep
No fixed limits - the following are typical

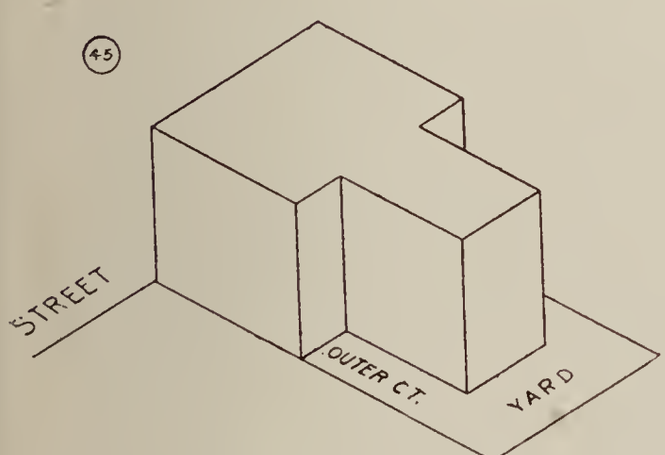
(43)



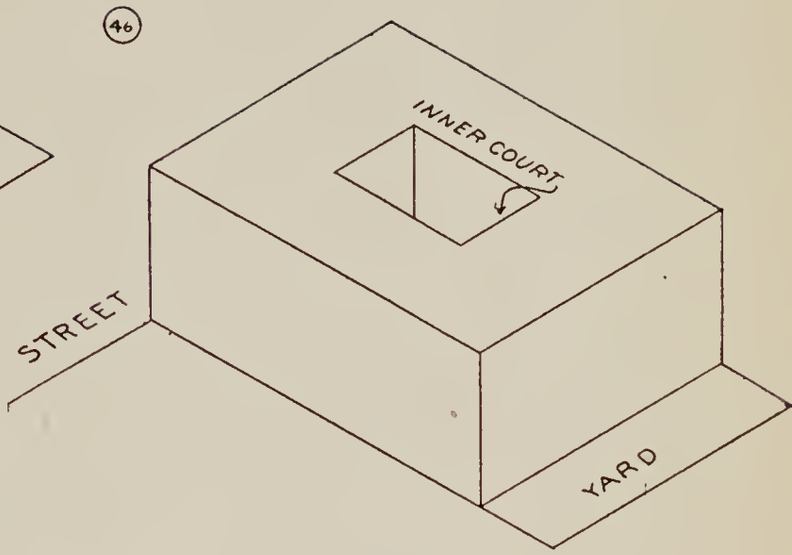
(44)



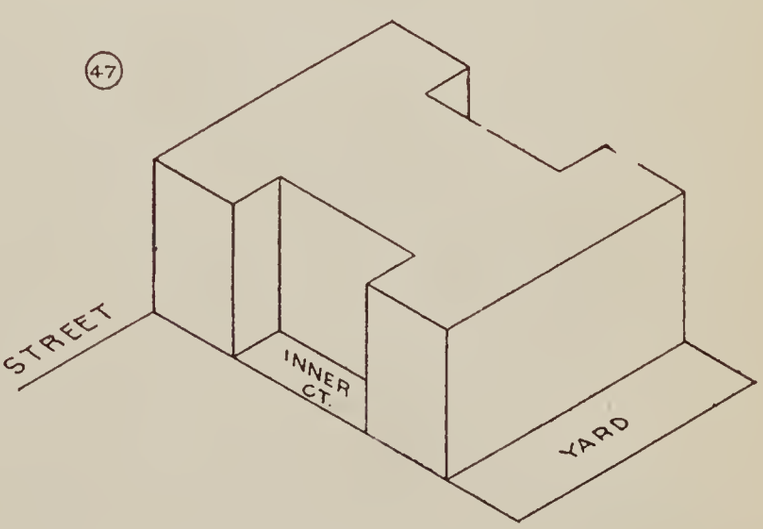
(45)



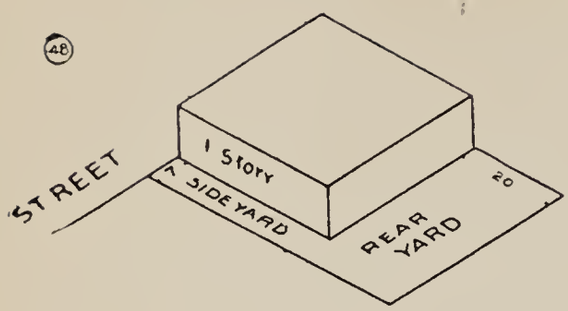
(46)

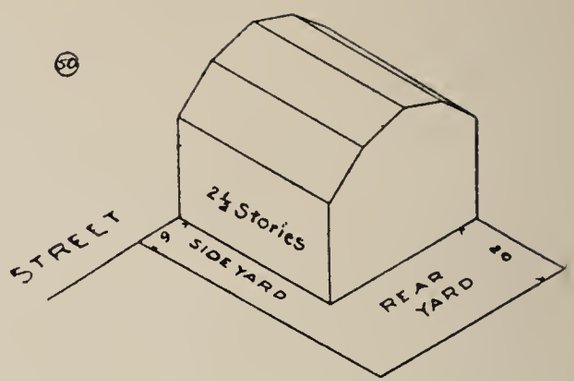


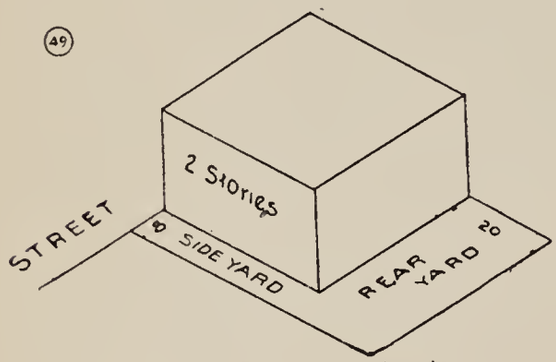
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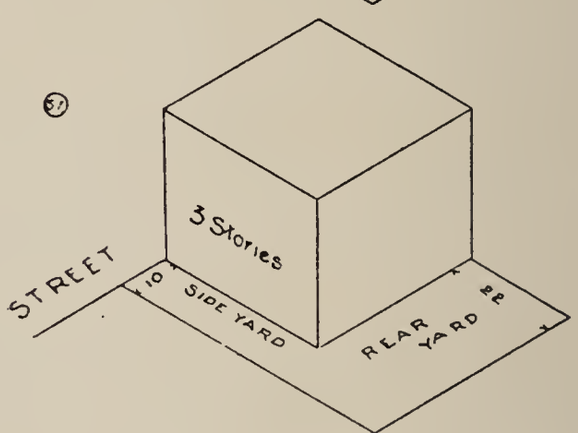


Districts 4 Nos 48-58
All Buildings



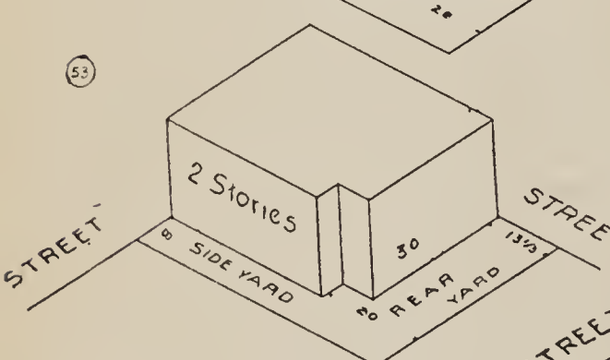




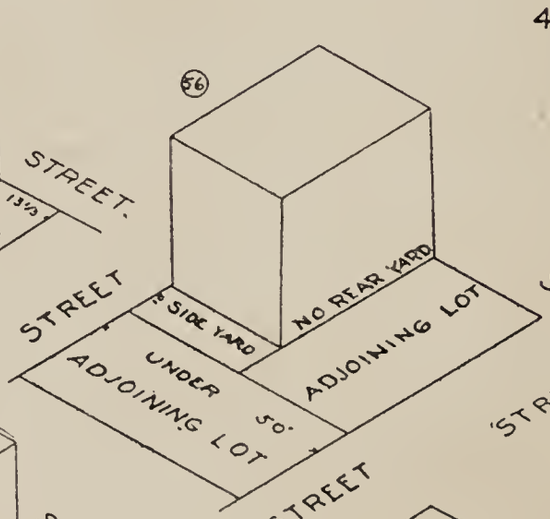


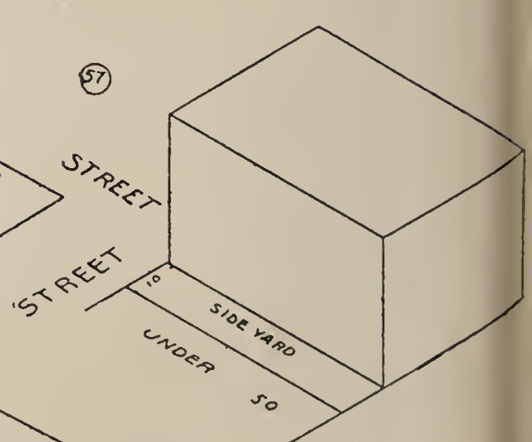
2 Corner Lots

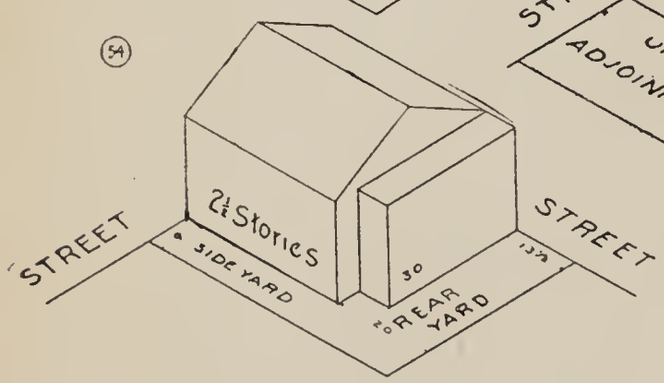


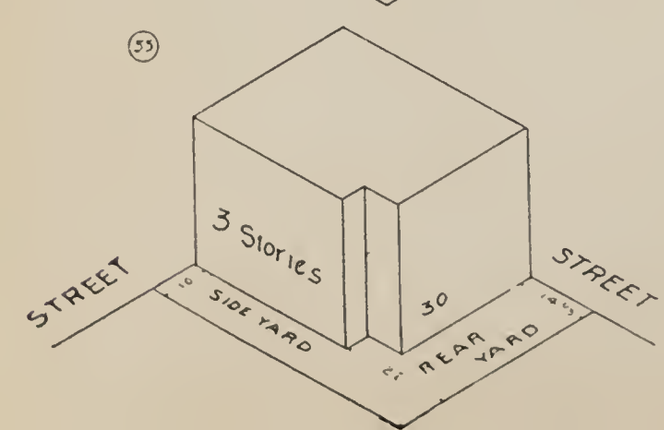


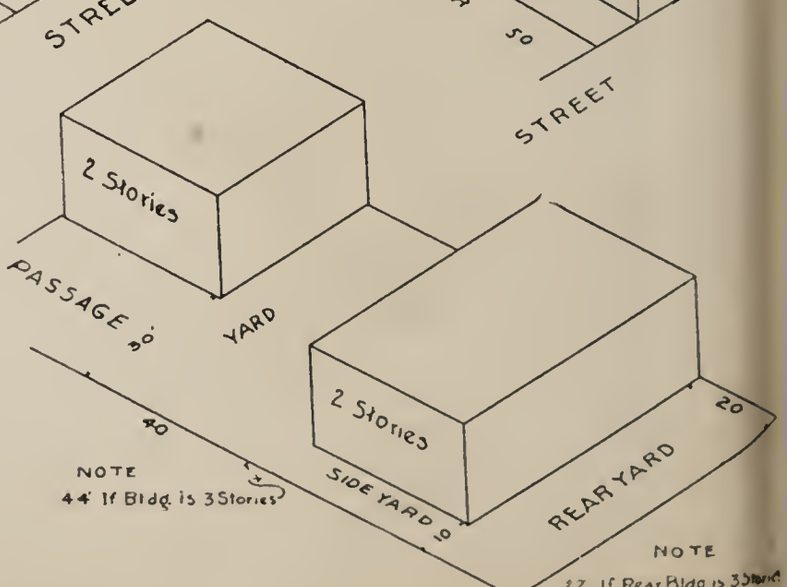
4 Exceptions











SOLDIERS' AID REPORT

To the Mayor and City Council of the City of Cambridge, Mass.,

Gentlemen:—I transmit herewith the report for the Committee on Soldiers' Aid for the year ending March 31, 1920.

The following appropriations were made for the year aforesaid:

SCHEDULE A		
Personal service (Budget)	$4,584 00	
Transfer from F-8	1,300 00	
		$5,884 00
SCHEDULE B		
Service Other than Personal (Budget)	740 00	
Transfer from F-8	450 00	
Transfer from Reserve Fund	154 31	
		1,344 31
SCHEDULE C		
Equipment (Budget)	20 00	
Transfer from F-8	350 00	
		370 00
SCHEDULE D		
Supplies (Budget)	235 00	
Transfer from F-8	15 00	
Transfer from Reserve Fund	99 98	
		349 98
SCHEDULE F-7		
Pensions and Annuities (Budget)	350 00	
SCHEDULE F-8		
Soldiers' Relief, State Aid, Military Aid and Burials (Budget)	33,000 00	
Balance from year 1918-1919	24,945 04	
Transfers from Reserve Fund	2,295 98	
Refunds on Pay-rolls	978 45	
		61,219 47
SCHEDULE G-1		
Care of Graves (Budget)	150 00	
Transfer from F-8	15 00	
		165 00
Total amount appropriated		$69,332 76

The following amounts were expended from the appropriations:

SCHEDULE A

Personal Service:

William F. Boyle, Investigator	1,223 00	
James T. Cox, Investigator	1,223 00	
Marcella P. Durnan, Clerk	884 00	
Edward F. Sullivan, Agent	2,205 32	
Transferred to Reserve Fund	348 68	
		5,884 00

SCHEDULE B

Services Other Than Personal:

Hospital Charges	81 57	
Groceries and Provisions	455 56	
Clothing, Shoes, etc.	182 02	
Coal and Wood	38 70	
Medical—Physicians and Medicines	79 95	
Transportation of persons	42 95	
Printing and binding	102 03	
Automobile repairs and care	67 01	
Registration of automobile	10 00	
Registration of Returning Service Men	172 20	
Postage and Stationery	23 80	
Telephone service	88 52	
		1,344 31

SCHEDULE C

Equipment:

Two desks and two chairs	168 81	
Counter and filing cabinets	91 04	
Transfer to Reserve Fund	110 15	
		370 00

SCHEDULE D

Supplies:

Office Supplies	58 25	
Food and ice	68 39	
Automobile Supplies	223 34	
		349 98

SCHEDULE F-7

Pensions and Annuities:

Eben W. Pike	350 00	350 00

SCHEDULE F-8

Soldiers' Relief, State Aid, etc.:

Civil and Spanish State Aid	8,064 00	
Civil and Spanish Soldiers' Relief	24,990 00	
German War State Aid	17,702 86	
German War Military Aid	3,844 00	
German War Soldiers' Relief	2,976 00	
Spanish War Military Aid	280 00	
Burials	304 34	
Soldiers' Relief, all wars, as per monthly drafts	928 27	
Transfers to A-B-C-D-G	2,130 00	
		61,219 47

SCHEDULE G-1

Care of Soldiers' Graves:		
Labor on graves at Rindge Avenue Cemetery..	157 50	
One load of loam	5 88	
Transfer to Reserve Fund	1 62	
		165 00
Total		$69,332.76

It will be noticeable in the foregoing return of expenditures that the amount expended for the relief of veterans of the Civil and Spanish Wars has not decreased to any extent from the amount used during the preceding year. This situation is due to the fact that many of these persons have called for assistance who heretofore have been able to get along with their pension allowance from Washington, D. C., and were also able to earn a little money. They have now reached an age when it is impossible for them to get employment of any kind and it now becomes the duty of the city, under the Soldiers' Relief laws, to properly care for them. In other cases it has been found necessary to increase the Soldiers' Relief allowance, because they have become invalids.

The laws governing the distribution of German War State Aid will cease to operate when the enlisted men are finally mustered out of service. This law, however, has been amended to the extent that under present conditions the veterans of the recent war and their dependents are eligible to receive State Aid, Soldiers' Relief and Military Aid and burial expense in the same manner and under the same conditions that are applicable to the veterans of the war of the Rebellion and Spanish War.

It will be necessary, therefore, to grant substantial assistance to the men who have been disabled in service, until such time as the Federal Government is in a position to care for them permanently. In these cases the dependents also will necessarily be cared for until the men are rehabilitated.

We have been advised by the Commissioner of State Aid that we should be prepared for a substantial increase in the expenditures under these several laws and be equipped for the increase of applicants.

During the year the Committees on Soldiers' Relief have been as follows:

1919	1920
Councillors	Councillors
John J. McCarthy, Chairman	John J. McCarthy, Chairman
George F. Mullett	William J. Lynch
William J. Lynch	Frank J. Lehan
Frank J. Lehan	William M. Hogan
William M. Hogan	Charles H. Shea

To these committees and His Honor Mayor Quinn I desire to extend my thanks for their co-operation and thoughtfulness in caring for the many applicants who came within the jurisdiction of the office.

Respectfully submitted,

EDWARD F. SULLIVAN,

Agent.

REPORT OF THE BOARD OF PARK COMMISSIONERS

To the Honorable, the City Council, of the City of Cambridge.

Gentlemen:—The Board of Park Commissioners has the honor to submit herewith its twenty-seventh annual report covering the municipal year ending March 31, 1920, together with the twenty-sixth annual report of the General Superintendent of Parks, as required by Section 5 of the Ordinance establishing the Park Department.

CHARLES RIVER PARKWAY

It looks as if by an act of the Legislature the people would vote on whether to turn this over to the State or not. All recommendations might be delayed until we find what the people want.

RINDGE FIELD.

A regrading of this field and the building of bleachers is a positive necessity. With the new law permitting baseball on Sundays, thousands more would enjoy a pleasant and happy day. The erection of a fence along the children's playground would be a great benefit to this field.

RUSSELL FIELD

Russell Field is being rented more for field events each year. It is therefore necessary that additional toilet arrangements be placed on these grounds; also additional showers for visiting school teams.

CAMBRIDGE FIELD

More settees should be placed along the field. This is another playground where thousands of people would appreciate bleachers so that they might sit down and enjoy a game. Sometimes on Saturday afternoons and holidays as many as four games of ball are going on at the same time on this field.

MILL POND

As in the other ball fields in our city, bleachers should be constructed here.

CAMBRIDGE COMMON

With the Government turning back the common to the city, there will be a regrading of the same, and the ball diamond enlarged and arranged so that skating can be held there in the Winter time.

WARD TEN PLAYGROUND

As this playground is desired mostly for small children, it is very necessary that it should be fenced just as the other playgrounds.

FINANCIAL STATEMENT

LAND FOR PLAYGROUNDS

Amount of unused balance of 1918 appropriation reappropriated April, 1919	$5,475 25

PARK LOANS
(Construction and Lands)

Amount of unused balance of 1918 appropriation reappropriated April, 1919	13 64

PARK LOANS

Amount of unused balance of 1918 appropriation reappropriated April 1st, 1919	975 43
Amount transferred from reserve fund	122 49
	1,097 92

MAINTENANCE—PLAYGROUNDS

Amount appropriated April 1st, 1919	3,500 00
Amount appropriated May 8th, 1919	1,000 00
	4,500 00

MAINTENANCE—GENERAL PARKS

Amount appropriated April 1st, 1919	52,750 36
Amount appropriated May 8th, 1919	2,000 00
Amount transferred from Forestry, May 8th, 1919	500 00
Amount appropriated June 14, 1919	1,500 00
Amount appropriated September 30, 1919	972 57
Amount appropriated October 15, 1919	1,000 00
Amount transferred from Street Department	1,402 26
Amount transferred from Reserve Fund	5,429 18
	65,554 37

MAINTENANCE—FORESTRY PARKS

Amount appropriated April 1st, 1919	12,580 00
Amount appropriated September 30th, 1919	489 21
	12,839 21
Amount transferred May 8, 1919, to Maintenance General	500 00
	12,389 21

A detailed classification of the expenditures will be found in the report of the General Superintendent of Parks.

Since the beginning of the work in 1893, there has been expended to date of money raised under Park and Esplanade Loans the sum of $1,724,357.05.

The division is as follows:

River Parkway, Section A:—		
Construction account	$201,321 19	
Land account	9,416 83	
		$210,738 12
River Parkway, Section B:—		
Construction account	$119,423 03	119,423 03
River Parkway, Section C:—		
Construction account	$131,002 14	
Land account	31,702 08	
		163,703 22
River Parkway, Section D:—		
Construction account	$132,594 13	
Land account	95,047 25	
		227,641 38
River Parkway, Section E:—		
Construction account	$18,412 64	
Land account	67,145 00	
		85,557 64
River Parkway, Section F:—		
Construction account	$99,444 21	
Land account	67,491 62	
		157,936 83
McNamee Square:—		
Construction account	$2,292 23	2,292 23
River Parkway, Section G:—		
Construction account	$127,037 68	
Land account	86,824 82	
		213,862 50
River Parkway, Section H:—		
Construction account	$13,135 30	13,135 30
River Parkway, Delta, Cambridge Bridge:—		
Construction account	927 83	927 83
Rebuilding Sea Walls:—		
Construction account	10,887 89	10,887 89
Cambridge Field:—		
Construction account	$128,513 59	
Land account	78,884 85	
		207,398 44
East Cambridge Embankment:—		
Construction account	$102,897 93	
Land account	45,231 40	
		148,129 33
General Account:—		
Construction account	$55,352 45	55,352 45

Rindge Field:—		
Construction account	$19,307 86	
Land account	31,461 95	
		50,769 71
Office Expenses:—		
Construction account	$15,915 29	15,915 29
Broadway:—		
Construction account	11,635 27	11,635 27
Nursery:—		
Construction account	9,240 49	9,240 49
Improvements at Rindge Field:—		
Construction account	8,877 98	8,788 98
Floating Bath House:—		
Construction account	4,483 28	4,483 28
Hastings Square:—		
Construction account	2,683 07	2,683 07
Baths and Lockers:—		
Construction account	2,500 00	2,500 00
Shower Baths and Heating Apparatus, Rindge Field:—		
Construction account	1,891 10	1,891 10
Winthrop Square:—		
Construction account	1,866 26	1,866 26
Dana Square:—		
Construction account	1,111 42	1,111 42
Mill Pond:—		
Construction account	999 97	999 97
Fort Washington:—		
Construction account	929 79	929 79
Memorial Gateway, Cambridge Common:—		
Construction account	565 07	565 07
Washington Elm:—		
Construction account	466 98	466 98
Porter Square:—		
Construction account	20 87	20 87
		$1,728,851 44
Less Park Revenue for 1894 and 1896 merged into land and construction accounts		4,494 39
		$1,724,357 05

Of the whole amount of Park Loans expended to April 1st, 1920, 29 per cent. has been for land and 71 per cent. for construction, as follows:

Land account (less revenues)	$508,710 31
Construction account	1,215,646 74
	$1,724,357 05

Respectfully submitted,

JOHN J. AHERN
STEPHEN H. HARRINGTON
JOHN F. SULLIVAN
CARROLL W. DOTEN
ALLEN W. JACKSON
Park Commissioners.

REPORT OF THE GENERAL SUPERINTENDENT OF PARKS

Cambridge, Mass., April 1, 1920.

To the Park Commissioners, City of Cambridge.

Gentlemen:—I have the honor to submit my Thirteenth Annual Report as General Superintendent of Parks, covering the financial year from April 1, 1919, to March 31, 1920.

SECTION A

The eight-foot loam space, for about five hundred feet east of Wadsworth Street, received the usual care and attention. One hundred young Norway maple trees and three hundred and fifty shrubs were planted in this section; twenty-five loads of cinders were applied to that part of Ames and Wadsworth Streets crossing the Parkway.

A permit was issued to the Charles River Amusement Company for the purpose of anchoring a large boat, famously known as the "Jack O'Lantern," at this point in the river, the object being to take passengers on sailing trips on the river. This boat was equipped for dancing and afforded much pleasure on the warm Summer evenings. In order to anchor this boat it was necessary to cut the iron fence at this point so as a gangplank could be laid; it was also necessary to lay a six-inch sewer pipe from the seawall to Wadsworth Street and to drive piles for dolphins, the expense of which was borne by the Charles River Amusement Company.

The rebate on the granolithic walk in front of the A. D. Little Company building was paid.

The cost of lighting this section was $1,366.62.

SECTION B

The raft in this section was in extremely poor condition. Not only were the deck boards completely rotted, but even the stringers were decayed, which necessitated replacing lumber in the following sizes: 14-4"x6" and 24-2"x8". New boards for the deck were replaced. This leaves the raft in first-class condition and should last for a substantial length of time. The roadway was repaired, oiled and sanded.

The plank walk on the westerly side was repaired.

Catchbasin on the forty-foot road was cleaned.

Grass shrubs received the usual amount of care.

The rebate due on the sidewalk in front of the Massachusetts Institute of Technology property was paid.

The top rail on fence along wall in this section is in very bad condition and should be repaired immediately.

The cost of lighting this section amounted to $731.11.

SECTION C

Practically nothing was done to this Section during the past year. As stated in report of last year, the heavy teaming between Massachusetts Avenue and the Gray & Davis factory still continues and is doing a considerable amount of damage to the roadway. The driveway which crosses the park sidewalk at the westerly side of the Gray & Davis building is in a deplorable condition as a result of the teams going to and from the factory.

It is also noted that the Street Department teams going to the dump on Vassar Street drive on the sidewalk, causing considerable damage to the extent that pedestrians are obliged to walk on the street. Complaints have been made regarding this abuse several times, but apparently without results.

The grass on ribbon strips was cut.

Fifteen new tree poles were set to protect the trees.

The cost of lighting this Section amouned to $619.52.

SECTION D

The roadway between Magazine and Brookline Streets was repaired by the application of a heavy standard oil and a coat of pea stone. When the pea stone had worked into the oil, a layer of sand was put on, thus making this portion of the road in fairly good condition. It must, however, be remembered that this road was built twenty-one years ago and is fast approaching a stage when it will be absolutely necessary to rebuild it.

The remainder of the roadway on this section received some slight repairs and is also in fair condition.

On June 23, 1920, the new Bath-house was opened to the public for the first time. There were several items not included in the contract for which it was necessary to make provision, as follows:

Installation of electrical appliances in the emergency room.

Purchase of lung motor.

Hanging of awning outside the windows.

Purchase of new furniture.

Necessary bathing suits and towels, which were purchased from the Women's Reformatory, Framingham, Mass., at a lower figure than could be obtained elsewhere.

Purchase of new flag for the pole on the building.

A large pole was set in the river, about one hundred feet from the shore, there being three large arc lights on the top, which illumined the entire bathing section.

Electric lights were installed in both houses.

Benches were erected on the Beach.

Forty-five tons of beach sand were spread on the beach.

A new granolithic walk was laid, extending from the yard at the stone-house to the beach, thus dispensing with the old steps that had long since outlived their usefulness, as well as making it more convenient for the boys who use the building.

It required eight men and four women to man the beach and houses. The receipts totalled $1,562.25 and the payroll amounted to $3,098.59. Notwithstanding the fact that the receipts were little more than one-half of the expense of maintaining this resort, I believe the City is more than compensated for this extra expense by the pleasure and relief obtained by its citizens who patronize the Beach.

The usual work of caring for the grounds was continued during the season.

The appropriation of $1,000 for Lawn Tennis Courts on the land between Magazine and Pearl Streets was expended, the work accomplished being shown below.

The ground, which was in a most uneven condition, was leveled.

Cinders were purchased and rolled over the entire surface to form a foundation.

Some clay was secured from the Sewer Department (they having a surplus on hand at Lakeview Avenue) and this was also applied. It soon developed, however, that the cost of teaming this clay was excessive, in fact, the actual figure was $2.75 per yard for hauling only. Obviously, this would make the total cost of doing this work altogether too much, and it was considered advisable to discontinue the work temporarily.

It is to be hoped that we will be able to provide for this material much more reasonably in the near future, so that the work may be completed without long delay.

The cost of lighting this section amounted to $479.86.

SECTION E

As this is the smallest section on the Parkway, the work is accomplished by the men of Section D and consists of cutting grass and cleaning sidewalks to the roadway.

A coat of oil and sand were applied and a few small holes were repaired.

The cost of lighting amounted to $218.53.

SECTIONS F. G. AND H

The usual work of maintenance was done during the year. Five men are employed here taking care of grass, shrubs and trees. The roadway between Western Avenue and DeWolf Street was oiled and sanded. Similar treatment was given to the small portion of Boylston Street which comes under the jurisdiction of this department.

The Boys' Bathhouse on Section H is well patronized in the bathing season. It became necessary to borrow a Voting Booth and place it here for the use of the girls. This is a makeshift at best and a building similar to the boys' should be built for the girls.

The cost of lighting these sections amounted to $1314.10.

LONGFELLOW PARK

The same care was given here as in former years, one man being employed from April 1st to November 1st.

CAMBRIDGE COMMON

On December 27th, 1920, a check was received from the United States Government in the amount of $13,123 for restoration of these grounds to their former condition. It is hoped that work will be started early in the Spring, and before Summer is over the Common should be in as good condition as heretofore.

The small squares adjacent to the Common received the usual care.

The flagpole was oiled.

PUBLIC LIBRARY GROUNDS

One man was employed during the season taking care of grass, shrubs, etc.

BROADWAY COMMON

It is getting to be rather a difficult problem to properly maintain this park. There are three large schools very near by and naturally most of the pupils utilize this common for their recreation. In spite of the fact that there is a portion of these grounds set aside for playground purposes, the children race around everywhere, breaking the trees and shrubs and even playing baseball and football in the center lawn. As a matter of fact, this lawn is getting to be more like a playground field than a park lawn. If this is to be maintained as a park, something will have to be done, either by employing police, or making arrangements with the Chief of Police to give the needed protection.

The flagpole received a coat of paint and the grounds received what care it was possible to give them.

HASTINGS AND DANA SQUARES AND FORT WASHINGTON

Hastings and Dana Squares, also Fort Washington, received the usual care. A new flagpole of Oregon pine was erected at Fort Washington by Daniel Marr & Sons. The cost for this work was $398.

The iron fence around this historic spot should be repaired.

RUSSELL FIELD

The fence posts here are in poor condition. It became necessary to replace several of these during the year as they decayed at the ground. Many more are in a similar condition. The boards on the concrete bleachers are also in a bad way and should be replaced as soon as an appropriation can be secured. A new hose was purchased for flooding purposes.

Baths were repaired and new mixers were installed in the shower room.

A voting booth, borrowed from the Building Department, was erected at that part of the field commonly known as "Jerry's Pit." This afforded shelter for the boys who wanted to go swimming. It is to be regretted, however, that the shelter did not last long—the night before the Fourth of July it was completely demobilized. Part of it was thrown into the water, some of it being found a half mile away, while more of it was discovered in the back yard of one of our good citizens. As a result the Building Department is minus a voting booth.

The usual two men were employed giving the field general care.

RINDGE FIELD

Nothing new was done here during the year, although there were various items whcih would have been provided for, if money enough could be secured, several of which I enumerate as follows:

Change of the baseball diamond.
Erection of new bleachers.
Completion of chain-link fence around the playground.
Repairing the roof and painting the Shelter Building.

All of the above should receive immediate attention.

The usual care was given to the grounds.

Baseball, football, lawn tennis, skating, etc., were all enjoyed by a large number of people.

Thirty-five dozen new towels were purchased.

CAMBRIDGE FIELD AND SHELTER

This field still continues to depreciate in appearance. This part of our city has become very cosmopolitan and the natural result is that it is, each year, becoming more and more difficult to keep it in even half-decent condition. The trese, shrubs and lawns are terribly abused, and if asked for a remedy, I should say: "Proper police protection, which we are not getting!"

After considerable controversy, as there seemed to be a variation of opinion among members of the Board as to the advisability of attempting to improve the appearance of this field, it was decided to replant the shrub beds running parallel with Cambridge Street, the total work done consisting of planting 1800 shrubs and 200 Oriental plain trees to replace those which had died.

The grounds were kept in as good a condition as possible, under the adverse conditions existing here.

It is my opinion that an honest effort on our part should be made to make all possible improvements here, and I feel confident that with the proper co-operation of the Police Department this can be readily accomplished.

The chain link fence was cleaned and painted, as were also the settees. The ball field was oiled and a new set of bases bought.

A new granolithic walk was laid on the incline running from the field to the basement door.

SHELTER—The extra $1000 appropriation was expended as follows:

12 shower baths were repaired.

A new granolithic floor was laid in shower room.

The walls in the shower rooms were cleaned, the old cement removed and the walls replastered with wainscot, making it much more sanitary and more economical in the long run.

Two new sections had to be put in the hot water heater.

The plumbing in the flush box in both men's and women's lavatories was repaired.

The walls in lavatories were painted and the woodwork varnished.

THORNDIKE FIELD

A new backstop was built to replace the one that was burned down.

The roof over the children's swings was repaired, also the slides and swings. The chain link fence has been broken down in several places and should be fixed.

The field was oiled and the grounds were kept in as good condition as is possible with only one man employed. The field is well patronized, baseball, football and skating being enjoyed in their respective seasons.

WARD EIGHT PLAYGROUND

This 2000 square feet of land was acquired last year in this section for playground purposes. As this property had been used for dumping purposes it was in a very rough and unsightly condition. The appropriation was expended for levelling and rolling the grounds, for which work it was necessary to employ some teams. A fence similar to those at other playgrounsd in use should be erected here, as should also some children's swings, and a man should be employed to take general charge of this place. It might be well to mention the fact that there is a small piece of land, about 7780 sq. ft., lying between the playground and the Parkway that should be owned by the city. This would not cost very much and it is needed to complete this playground.

MILL POND

One man is employed here the year round, in Summer months looking after the grounds and swings, and in the Winter taking care of the ice. This field is becoming more popular every year, with baseball, football, soccer-ball and skating as incentives.

This fall goal posts were erected for both football and soccer-ball, the grounds being spacious enough to permit of both.

Some slight repairs were made on the swings.

SHADE TREES

The appropriation for this work was not sufficient to permit of any extensive planting. There were only 46 new trees planted; 989 trimmed and 122 dead trees removed. Before the war we were planting at the rate of 1000 new trees annually, but since then this part of the work has been sadly neglected.

It is to be hoped that a more liberal allowance for this work will be given in the future.

BROWN TAIL AND GYPSY MOTHS

The condition of the trees on account of these pests has been greatly improved, as it now requires only about one-half the time and money that was expended for this work in former years. Nevertheless, it is well to go over the ground each year and improve on the work, thus keeping it in the best possible condition and allowing of no opportunity for these moths to get a headway.

WASHINGTON ELM

This old historic tree is holding its own very well and whatever care is necessary is given to it each year.

The fence around the tree seems to be a target for reckless automobile drivers. Several times this year automobiles have dashed into the fence, with the result that the rails have been broken down, leaving several spaces in the fence.

One hundred and forty settees were repaired with new slats and were painted.

A new Ford automobile was purchased for the use of the Superintendent from Lalime & Partridge at a net cost of $647.16, this including the allowance made on the old car.

THE YEAR'S EXPENDITURES

The expenses of the department for the financial year of 1919 are shown in the following summary of the departmental accounts.

PARK LOANS

BATHHOUSE, MAGAZINE BEACH

Amount of unused balance of 1918 appropriation reappropriated April 1, 1919		975 43
Amount transferred from Reserve Fund		122 49
		1,097 92

EXPENDED

Granolithic walks and retaining walk outside building	551 39	
Electrical work outside houses	198 48	
Electrical work inside houses	193 06	
Repairs building	131 47	
Advertising	5 52	
Total amount expended		1,097 92

LAND FOR PLAYGROUNDS

Amount of unused balance of 1918 appropriation, reappropriated April, 1919		5,475 25

EXPENDED

Land taken for Ward 8 Playground from Herbert Dyer, Trustee, and George T. Bossom	4,879 00	
Examination of titles	110 00	
Incidentals	1 30	
Total amount expended		4,990 30
Balance unexpended		484 95

MAINTENANCE GENERAL—PARKS

Amount appropriated March 11, 1919	52,750 36
Amount transferred from Forestry, May 8, 1919	500 00
Amount appropriated May 8, 1919	2,000 00
Amount appropriated June 14, 1919	1,500 00
Amount appropriated September 30, 1919	972 57
Amount appropriated October 15, 1919	1,000 00
Amount transferred from Street Department	1,402 26
Amount transferred from Reserve Fund	5,429 18
	65,554 37

EXPENDED

COMMONS, SQUARES AND PUBLIC GROUNDS

Pay-rolls	$3,924 32	
Lighting	146 38	
Advertising	5 14	
New pole at Fort Washington	395 00	
Painting fences	137 70	
Lawn seed	20 62	
Ensign	13 72	
Repairs fence, Washington Elm.	78 40	
Stakes	94 61	
Sand for walks	49 32	
Amount carried forward	4,865 21	65,554 37

Amount brought forward	4,865 21		65,554 37
Cleaning and painting flag-pole at Broadway Comfon	34 40		
Oiling pole in Harvard Square and fixing halliards	29 00		
Housing other poles	11 18		
Lumber	107 56		
Cinders, etc., for filling Common Street	30 87		
Teaming	15 00		
Tools	123 51		
			5,216 73

RIVER PARKWAY, SECTIONS A. B. C. D. E. F. G AND H

Section A:			
Lighting	1,366 62		
Pay-rolls	210 75		
Trees	233 00		
Cinders	55 86		
		1,866 23	
Section B:			
Lighting	432 14		
Road repairs	113 61		
Pay-rolls	2,915 99		
Walk repairs	4 41		
		3,766 15	
Section C:			
Lighting		619 52	
Section D:			
Lighting	479 86		
Pay-rolls	1,637 22		
Road repairs	436 32		
Teaming	100 00		
Bases for ball field	8 08		
		2,661 48	
Section E:			
Lighting	218 53		
Pay-rolls	47 00		
Road repairs	121 82		
		387 35	
Section F:			
Lighting	400 74		
Pay-rolls	47 00		
Road repairs	255 50		
Teaming	35 00		
		738 24	
Sections G and H:			
Lighting	696 03		
Pay-rolls	3,166 04		
Grate covers	17 39		
Teaming	20 00		
		3,899 46	
			13,966 43
Amount carried forward		19,183 16	65,554 37

Amount brought forward		19,183 16	65,554 37
LONGFELLOW PARK			
Lighting	76 15		
Pay-rolls	896 00		
Miscellaneous	2 20		
			974 35
CAMBRIDGE FIELD AND SHELTER			
The Field:			
Pay-rolls	3,942 22		
Lighting	391 98		
Plant trees and shrubs	463 00		
Teaming	30 00		
Paint for fences	220 10		
Bases for field	6 86		
Painting flag-pole	34 30		
Slide repairs	16 95		
Supplies	101 17		
Beach sand	21 44		
		5,228 02	
The Shelter:			
Pay-rolls	3,295 88		
Lighting	29 39		
Plumbing repairs	4 15		
Soap	282 88		
Disinfectant	15 68		
Laundering towels	99 90		
Coal	722 71		
Toilet paper	33 32		
Granolithic walks in shower bath room	171 58		
Repairs to building	140 58		
Repairing shower baths and new section in heater	509 84		
Tiling shower bath room	166 60		
Freight charges	3 42		
		5,519 36	
			10,747 38
RINDGE FIELD AND SHELTER			
The Field:			
Pay-rolls	1,136 50		
Lighting	102 24		
Lumber	7 23		
Sand for playground	7 47		
Supplies	58 21		
Bases for field	6 86		
		1,289 51	
The Shelter:			
Pay-rolls	2,137 75		
Lighting	14 22		
Laundering towels	105 44		
Coal	179 25		
Supplies	14 17		
Towels	144 06		
Plumbing repairs	2 94		
		2,597 83	
Amount carried forward		34,792 23	65,554 37

Amount brought forward		34,792 23	65,554 37
MILL POND			
Pay-rolls			1,338 50
RUSSELL FIELD			
Pay-rolls	2,589 00		
Gas consumed and fixtures	47 94		
Plumbing repairs	152 24		
Fence repairs	62 43		
Use of steam roller	10 00		
Laundering towels	1 86		
Lumber	21 71		
Coal	34 08		
Miscellaneous	2 84		
Hose for flooding field	64 68		
Teaming	10 00		
			2,996 78
THORNDIKE FIELD			
Pay-rolls	1,442 50		
Lighting field	108 54		
Water pipe repairs	15 45		
Sand for boxes	13 49		
Drain repairs	1 48		
Apparatus repairs	311 40		
			1,892 86
GENERAL ACCOUNT			
New automobile	647 16		
Stationery and printing	352 58		
Repairs automobile and truck	378 44		
Gasoline and polarine	461 96		
New tires	113 33		
Stamps and stamped envelopes	56 52		
Ice for cooler	36 26		
Spring water	18 47		
Telephone at yard	23 57		
Office supplies	100 44		
Roller repairs	8 73		
Directory	5 88		
Storage of car and truck	188 60		
Miscellaneous	10 32		
Expressage	3 09		
License of Superintendent	2 00		
			2,407 35
SALARIES			
General Superintendent of Parks		2,400 00	
Clerk and Bookkeeper		1,196 00	
Temporary clerk		16 00	
			3,612 00
FLOATING BATH HOUSE			
Repairs bath house	695 45		
Towing bath house	127 40		
Pay-rolls	398 25		
Medicinal supplies	1 00		
			1,222 10
Amount carried forward		48,261 82	65,554 37

Amount brought forward	48,261 82	65,554 37

GERRY'S LANDING HOUSE

Pay-rolls	606 00	
Moving portable house	140 20	
Plumbing repairs	7 91	
Water off and on	1 00	
Medicinal supplies	2 90	
		755 11

WARD SEVEN HOUSE, MAGAZINE BEACH

Pay-rolls	2,998 49	
Towels	144 55	
Plumbing repairs	71 85	
Installing lights on beach	384 74	
Laundering suits, towels, etc.	424 00	
Furniture	111 98	
New suits	597 29	
Repairs building	192 18	
Tools, hardware, etc.	108 95	
Installing electric lights in house	119 62	
Lungmotor	132 30	
Lighting service	43 72	
Signs	21 07	
Water Wings	17 55	
New hose	18 62	
Water off and on	2 00	
New flag	8 24	
Medicinal supplies	6 00	
Awnings for windows	12 73	
Stationery	9 30	
Supplies	13 63	
		5,439 31

PENSIONS

Pensions granted several employees	1,019 77

SNOW REMOVAL

Pay-rolls	4,448 66

EDGESTONES AND SIDEWALKS

Rebate on granolithic walks along Charles River Road	1,402 25

SAND AT MAGAZINE BEACH

Sand for beach	836 96	
Advertising	5 88	
Pay-rolls	458 68	
		1,301 52

TENNIS COURTS, CAPTAIN'S ISLAND

Pay-rolls	257 90	
Cinders	501 00	
Coal for steam roller	16 66	
Teaming	10 00	
		785 56
Amount carried forward	63,415 00	65,554 37

Amount brought forward	63,415 00	65,554 37

WARD EIGHT PLAYGROUND

Pay-rolls	1,410 82	
Teaming	10 00	
		1,420 82

OIL FOR PLAYGROUNDS

Oil to lay dust		718 55
Total amount expended		65,554 37

MAINTENANCE—FORESTRY

Amount appropriated May 11, 1919		12,580 00
Amount appropriated September 30, 1919		489 21
		12,839 21
Amount transferred May 8, 1919, to Maintenance, General		500 00
		12,339 00

EXPENDED

BROWN TAIL MOTH EXTERMINATION

Pay-rolls	2,990 24	
Arsenate of lead	199 80	
Repairs spraying machine	63 24	
Teaming, hire of horses for spraying machine	190 00	
Ladder repairs	19 60	
Advertising	2 45	
		3,465 33

SHADE TREES

Pay-rolls	6,619 28	
Sharpening saws	18 95	
Teaming	159 00	
Paving block, repairing sidewalks	3 95	
Arsenate of lead	200 00	
Repairs spraying machine	13 82	
Hose for spraying machine	14 90	
Trees	50 28	
Loam	24 70	
Hose for tying young trees	3 53	
Sharpening tools	10 78	
Tools	12 59	
Advertising	1 96	
		7,133 74
Total amount expended		10,599 07
Balance unexpended		1,739 93

MAINTENANCE—PLAYGROUNDS

Amount appropriated March 11, 1919	3,500 00
Amount appropriated May 8, 1919	1,000 00
	$4,500 00

EXPENDED

Salaries

Salaries of instructors, etc.		3,348 88	

General Expenses

Transportation of children and car tickets	181 84		
Prizes on Demonstration Day	110 52		
Hire of chairs	1 96		
Bats, Baseballs, etc.	439 84		
Stationery	30 14		
Reed, raphia, etc.	72 03		
Moving pianos	14 70		
Cheese cloth	45 43		
Sailor caps and flags	39 99		
Services of band	73 07		
Hire of bandstand	34 30		
Lime	2 65		
Cleaning Alliance building	17 64		
Miscellaneous	6 63		
		1,070 74	
Total amount expended			4,419 62
Balance unexpended			80 38

Respectfully submitted,

JOHN F. DONNELLY,
General Superintendent of Parks.

REPORT OF THE SUPERINTENDENT OF PLAYGROUNDS

Cambridge, Mass., October 31, 1919.

The Board of Park Commissioners, Cambridge, Massachusetts.

Gentlemen:—I submit herewith a statement concerning the work on the playgrounds during the summer of 1919. The nature of the work has varied so slightly from that of other years that report in detail seems superfluous. Insistence upon certain accepted standards in the appointment of teachers has raised the efficiency and dependability of the every day work to a degree that has permitted the supervisor to devote more of his time than heretofore to the organization of special activities. It has also permitted a closer study of the needs of any one playground or section and by a concentration of supervision has enabled us to determine the causes of poor attendance where the general factors indicated every means for successful work. So marked is the broader opportunity of the supervisor when a carefully selected list of teachers is appointed that I cannot refrain from expressing the hope that the policy of the Board will continue in the direction of securing the most capable teaching staff that the list affords.

With the teacher problem solved, our remaining difficulty is, as usual, one of finance. It needs no comment here to make it plain that extension and improvement of the work is dependent wholly upon the appropriation. The traditional policy of adding a nominal increase to the appropriation of the preceding year has kept the whole situation at practically the same level of endeavor during the past five or six years. On the playgrounds in operation I feel certain that good work has been done. A greater system, of course, is needed.

In connection with the "Safety First" movement in other cities the schools have played an important part in keeping the children on the playgrounds and away from the streets. A great deal of good in this direction might be accomplished in our own community were the playground idea to be called to the attention of the children in the class-

rooms. A "Playground Day" in the schools would serve a most helpful purpose in encouraging the use of the parks and school yards in other than the Summer months. The need of an all-year program has been called to your attention in a previous report. It is repeated in the hope that the Board may at some time obtain the necessary appropriation.

A very successful Demonstration Day was held at Russell Field during the final week. The program given below will furnish some idea of the specific nature of the season's work. Included also are the weekly attendance figures. The assistance of the Superintendent of Parks and the Secretary of the Board has meant much for the thorough accomplishment of what has been planned. Appreciation is herein expressed for their cordial support.

NINTH ANNUAL DEMONSTRATION DAY OF PUBLIC PLAYGROUNDS

Russell Field, North Cambridge, Wednesday, August 27, 1919.

PROGRAM

OPENING MARCH AND DRILL.

FOLK DANCES

(*a*) Hopp Mor Annika.
(*b*) Ace of Diamonds.
(*c*) Polka.
(*d*) Over There.

QUOIT RACES.

(*a*) Sub-Junior Boys.
(*b*) Junior Girls.

50 YARDS DASH. Sub-Junior Boys.
75 YARDS DASH. Junior Boys.
100 YARDS DASH. Senior Boys.

FOLK DANCES.

(*a*) Bunnie's Ball.
(*b*) Dutch Dance.
(*c*) Happy Wanderer.

QUOIT RELAY RACES.

(*a*) Sub-Junior Boys.
(*b*) Sub-Junior Girls.

SACK RELAY

FOLK DANCES.

(*a*) Frenchy.
(*b*) Corn Cracker's Dance.
(*c*) Barn Dance.

RELAY RACES.

(*a*) Boys' Diamond.
(*b*) Girls' Diamond.
(*c*) Girls' Relay.
(*d*) Junior Boys.
(*e*) Burden.

SPECIAL FOLK DANCES.

Sailor's Hornpipe.....Thorndike and Broadway
Bubbles .....Rindge and Mill Pond
Colors .....Cambridge Field and Merrill

SINGING OF "STAR SPANGLED BANNER."

ATTENDANCE

	Week ending July 12		Week ending July 19		Week ending July 26		Week ending August 2	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Broadway	517	483	639	596	697	631	732	640
Cambridge Fd..	2,500	1,825	3,550	4,475	2,625	3,625	2,625	4,000
Gore	73	283	137	338	100	316	177	284
Merrill	524	627	555	615	691	327	614	355
Mill Pond.....	960	900	1,195	1,397	990	1,290	1,035	1,380
Rindge	1,027	788	734	773	1,081	657	872	564
Thorndike	865	1,322	1,260	1,065	1,055	1,475	1,235	1,625
Total	6,466	6,228	8,070	9,239	7,239	8,321	7,290	8,848

	Week ending August 9		Week ending August 16		Week ending August 23		Week ending August 30	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Broadway	666	674	604	611	742	746	606	554
Cambridge Fd..	2,200	3,350	2,000	3,625	3,175	2,585	1,740	1,540
Gore	108	248	..	..	..	..	..	..
Merrill	717	330	585	266	753	346	591	335
Mill Pond	920	1,038	1,180	1,115	1,025	1,094	725	1,031
Rindge	772	498	873	616	947	805	649	336
Thorndike	1,665	1,435	1,235	1,280	1,115	1,209	630	680
Total	6,466	6,228	8,070	9,259	7,239	8,321	7,290	8,848

	TOTAL		
	Boys	Girls	
Broadway	5,203	4,935	10,138
Cambridge Fd	20,415	25,025	45,440
Gore	595	1,469	2,064
Merrill	5,030	3,201	8,231
Mill Pond	8,030	9,245	17,275
Rindge	6,955	5,037	11,992
Thorndike	9,060	10,091	19,151
Grand total	55,288	59,003	114,291

Respectfully submitted,

TIMOTHY F. DOWNEY,
Superintendent of Playgrounds.

ANNUAL REPORT OF THE ELECTRICAL DEPARTMENT

Office of the City Electrician.

To the Honorable, the City Council of the City of Cambridge:

Gentlemen:—I submit herewith the twenty-first annual report of the Electrical Department for the fiscal year beginning April 1st, 1919, and ending March 31st, 1920.

INSPECTION OF ELECTRICAL WIRING IN BUILDINGS

As may be seen by the accompanying table, the number of installations inspected for electrical work and the number of inspections made has increased materially over past years, and, although the capacity of lamp sockets is slightly less than last year, the number of motors and other devices has increased, and many new devices that have not been in use before have been installed this year, so that the total amount of work has increased materially over past years.

The recommendation of the City Electrician relative to fees for permits was acted upon favorably by the City Council during this year and the regulations for permits and fees therefor went into effect on November 3rd, 1919. For the five months remaining of the fiscal year the amount collected for fees was fourteen hundred dollars ($1400). It is expected that the proportionate amount for next year will be greater. The issuance of permits for electrical work and the collection of a fee enables the department to keep more closely in touch with electrical work, and gives greater assurance that work will be inspected, since the permit calls the attention of the department before work is started that work is to be done.

The number of inspections and the increasing need of re-inspections of old installations makes it desirable that another inspector should be employed in the Department. I recommend, therefore, that next year an appropriation will be made to enable another inspector to be employed.

The following table is a comparison between the work done during the past year and the year before:

TABULATION OF INSPECTION OF INTERIOR WIRING

	April 1, '18 to March 31, '19	April 1, '19 to March 31, '20
Number of inspections	1,729	3,039
Number of installations inspected	992	1,703
Capacity of lamp sockets installed	31,334	30,369
Stoves and other heating devices	10	34
Number of power motors installed	360	575
Horse power of motors installed	1,445	3,494
Number of 110-volt motors installed	*	54
Horse power of 110-volt motors installed	*	9
Number of generators installed	..	5
K. W. capacity of generators installed	..	195
Number of welders installed	*	2
K. W. capacity of welders installed	*	23
Number of rectifiers installed	*	11
Number of transformers installed	*	26
K. W. capacity of transformers installed	*	1,176
Number of defects noted	439	611
Number of unfinished inspections	54	108

*No separate record kept heretofore.

FIRE ALARM AND POLICE SIGNAL SYSTEMS

As for last year, the work in these two branches of the Department consisted almost altogether of maintenance work. Again this year, also, the appropriation for this work was not sufficient to maintain the systems at their former efficiency. These appropriations were wholly for material, and this lack of material made a greater amount of labor necessary, so that although the lack of material has prevented the efficiency of the systems from being maintained, the cost of the work has been greater, on account of this increase in labor, than it would have been if the appropriations had been large enough to purchase sufficient material.

Detailed records of the work of the Fire Alarm and Police Signal Systems are kept in the Fire Alarm Office, as are also records of all reports that come into the office. In addition to matters connected with the signalling systems, these reports cover also every phase of activity connected with the lives of the citizens. During the past year these reports have covered matters ranging from assistance in getting a cat out of a tree to a request for rescue from murderous assault.

The following table gives a few statistics of the system:

Central station equipment	1
Fire alarm boxes on the street	167

Fire alarm boxes on private premises	35
Fire alarm boxes with keyless doors	108
Fire alarm boxes with glass key doors	15
Length of circuit wires in system in miles	185
Tower bells connected with system	8
Steam whistles connected with system	2
Tappers connected with system	25
Private telephones connected with system	23
Number of bell alarms for fire sounded during the year	434
Number of telephone alarms reported during the past year	381
Total number of alarms for fire during the past year	815
Number of second alarms included in above	1
Number of third alarms included in above	0
Number of fourth alarms included in above	0
Number of general alarms included in above	1

During the year no new fire alarm boxes were installed but the American District Telegraph Service was installed in the following buildings, and fire alarm numbers were given thereto, as follows:

1342	James J. Graham Co.	25 Otis Street	August 25, 1919
1382	Metropolitan Coal Co.	Bridge Street	May 2, 1919
2352	Boston Woven Hose & Rubber Co., Bldg. 19		December 15,1919
2742	Boston Confectionery Co.	Main Street	January 11, 1920

Box 631, which was installed for the Radio School on the Cambridge Common, was discontinued on October 29, 1919. This box, having been of a temporary nature, was not included in the table above.

The following police boxes were installed:

123	Davenport and Elm Streets	District 4	January 7, 1920
114	Main Street at Railroad Crossing.	District 2	January 14, 1920

Box 114 was paid for by the Massachusetts Institute of Technology. They intend to purchase another box in the near future to be installed on the river parkway.

Serious consideration should be given to the appropriation of a sufficient sum to purchase both fire alarm and police boxes for installations that have been selected by the chiefs of the Fire and Police Departments, some of which locations were selected several years ago.

The need of inspections of poles and pole line construction is so great that an attempt was made during the past year to make such an inspection. Time could be given to it so infrequently and intermittently by the men capable of doing the work that it was found necessary to abandon it, since there was no indication that the work could be systematized or even finished to a sufficient extent to make the results worth the continuation of the attempt. I trust, therefore, that my oft-repeated recommendation for an appropriation for an inspector for this work may bear fruit.

The number of approvals for permits granted during the past year was as follows:

	Cambridge Electric Light Co.	New England Tel. & Tel. Co
New pole locations	35	8
Removing poles	18	..
Replacing poles	137	14
Cementing and dropping in poles	2	11
Running wires	25	1,105
Conduit locations, alterations & repairs	8	12
Underground service connections	16	22

The permits noted in this table are granted by the Street Department, but the application for the permit is approved by the Electrical Department, except the permits for running wires, which permits do not necessitate digging.

STREET LIGHTING

As indicated in last year's report, the Type "C" lamps on Cambridge Street, between Portland Street and the dam, were removed and Ornamental Luminous Arc lamps, heretofore called "Magnetite" lamps, were substituted therefor. These Ornamental Luminous Arc lamps were also installed on Cambridge Street between Columbia Square and Portland Street. The lighting up of this latter section causes the whole of Cambridge Street from the dam to Inman Square to be lighted with this type of lamp.

I recommend that during the coming year Ornamental Luminous Arc lamps be installed on Massachusetts Avenue between Garden Street and Roseland Street, and between Yorktown Street and the Arlington Line.

All other types of street lights, as ordered by the City Council, were installed during the year.

The following table shows a comparison between the number of lamps in operation on the streets March 31st, 1919, to March 31st, 1920:

	March 31, 1919	March 31, 1920
Ornamental Luminous Arc lamps	207	259
Type "C" 1000-c. p. lamps	35	...
Tungsten arc lamps—250 c. p.	560	563
Tungsten arc lamps—300 c. p.	100	98
Incandescent lamps	5	5
Welsbach lamps	307	305

The desirability of substituting electric incandescent lamps for the Welsbach gas lamps has become a serious question from the point of view of both illumination and finance. There has been no advance in

the efficiency of the gas lamps, but the efficiency, and therefore the amount of illumination from the electric lamps, has increased materially in recent years, although the price of the electric lamp has decreased, whereas the price asked for the gas lamp has increased and, according to the indications, will be greater next year than at present. Substituting electric lamps for the gas lamps now on the street will entail a saving of about Thirty-two Hundred Dollars ($3200) per year, with a more satisfactory illumination. The use of electric lights will necessitate the erection of about two hundred (200) poles, and for this reason the sanction of the City Government must be obtained before the change can be made. I recommend that this matter be given serious consideration.

I extend my thanks to His Honor the Mayor and the City Council for their assistance in connection with the work of the Department during the year.

Respectfully submitted,

TIMOTHY C. O'HEARN,
City Electrician.

REPORT OF BOARD OF CEMETERY COMMISSIONERS

Cambridge, April 1, 1920.

To the Honorable, the City Council of the City of Cambridge:

The Board of Commissioners of Cambridge Cemetery respectfully submit its Sixty-sixth (66th) Annual Report, the same being for a twelve months' period ending March 31, 1920.

The amounts appropriated for the use of the department during the past season were as follows:

General expenses	$5,953 47
Salaries	37,355 33

The following amounts were expended, to wit:

General expenses	5,953 47
Salaries	37,355 33

For detailed account of expenditures reference is made to the report of the City Auditor.

The revenue to April 1, 1920, has been as follows:

Sales	14,495 10
Interments, Care of Lots, etc	14,828 43
Interest on Perpetual Care Fund	6,543 90

The revenue of the department is less for the year than that of the previous year, when the revenue was the highest in the history of the department.

The influenza epidemic of 1918-1919 caused a large increase in the sale of lots in that year.

The receipts, however, were much more than the receipts of 1917-1918.

The receipts are smaller than the expenditures owing to the fact that more land had to be graded and plotted into lots, as about all the prepared lots were sold during the fall and winter of 1918-1919.

The increased cost of labor and material contributed to the fact that the revenue was less than the receipts, as no advance in price of lots or of any of the work of the Cemetery was increased with the exception of a small increase for annual care.

The Board felt it was its duty to keep the price of lots and of burials, etc., as low as possible.

In addition to the usual routine work of the Cemetery, work on the grading of the Pond section in the older part of the Cemetery has begun and good progress toward its completion made. When this work is finished it will give to the Cemetery lots which will sell for upward of $50,000.

The splendid appearance of the grounds, during the Spring and Summer seasons especially, has called forth much praise from the many visitors.

During the past year the sum of $3,404.25 has been added to the Perpetual Care fund.

THOMAS E. WILLIAMS, Chairman
EBEN H. GOOGINS
JEREMIAH J. SULLIVAN
GEORGE T. QUINN
TIMOTHY F. McCARTHY
JOHN McKENZIE

Board of Cemetery Commissioners.

REPORT OF THE INSPECTOR OF ANIMALS

April 1, 1920.

The Honorable Edward W. Quinn, City Hall, Cambridge, Mass.

Dear Sir:—I beg to submit the following report for the year ending April 1, 1920, for the Department of Inspection of Animals.

This department includes the care of all animals in health and disease.

During the year no serious outbreak of contagious disease has occurred in our city.

A number of dog bites have been reported and investigated and animals kept under quarantine until customary fifteen days have elapsed. This is one of the rules of the Bureau of Animal Industry as regards "Rabies" and pertaining to its control.

Number quarantined and investigated	9
Positive	0
Negative	9
Total number of visits	135

GLANDERS.

A contagious disease affecting horses. This disease has been on the decline in our City for the past six years, due, no doubt, in a great measure to the closing of the watering troughs and the thorough disinfection of infected stables and blacksmith shops.

Number horses reported	11
Negative	9
Positive	2
Visits to stables for inspection	13
Visits to blacksmith shop for inspection	9

TUBERCULOSIS IN COWS.

All cows and cow barns in the city have been examined and inspected by me twice during the past year.

Number cases inspected	35
Number cases found	None

HORSES

Sick horses in the various departments of the City:

Street Department (Hampshire St., Raymond St., Tannery St.)	528
Fire Department	115
Water Department	43
Cemetery Department	10
Overseers of the Poor	10

MISCELLANEOUS

Examination of horses coming into the city from other states.	619

FIRE ALARMS

It is the duty of the Inspector of Animals to answer all second alarms and care for the welfare of the horses. I have attended all such cases.

Two old horses have been humanely destroyed through old age and disability.

Total number of visits made for all departments during the past year	928

D. L. BOLGER, D. V. S.,
Inspector of Animals.

APPENDIX

ORDINANCES

PASSED BETWEEN APRIL 1, 1919, AND APRIL 1, 1920.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "DUTIES AND SALARIES."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of City Clerk by striking out the numerals 3300 and inserting in place thereof the numerals 3800.

As amended the line will read as follows:

City Clerk $3,800

Approved December 31, 1919.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "DUTIES AND SALARIES."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of City Solicitor by striking out the numerals 3500 and inserting in place thereof the numerals 3800.

As amended the line will read as follows:

City Solicitor $3,800

Approved March 18, 1920.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "DUTIES AND SALARIES."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of City Treasurer and Collector, by striking out the numerals 3000 and inserting in place thereof the numerals 3500.

As amended the line will read as follows:

City Treasurer and Collector $3,500

Approved December 31, 1919.

An Ordinance In Amendment of An Ordinance Entitled "Duties and Salaries."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of City Auditor by striking out the numerals 3000 and inserting in place thereof the numerals 3500.

As amended the line will read as follows:

City Auditor $3,500

Approved December 31, 1919.

An Ordinance In Amendment of An Ordinance Entitled "Duties and Salaries."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of the City Engineer by striking out the numerals 3000 and inserting in place thereof the numerals 3500.

As amended the line will read as follows:

City Engineer $3,500

Approved December 31, 1919.

An Ordinance In Amendment of An Ordinance Entitled "Duties and Salaries."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of the Chief of the Fire Department by striking out the numerals 2500 and inserting in place thereof the numerals 3000.

As amended the line will read as follows:

Chief of Fire Department $3,000

Approved December 31, 1919.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "DUTIES AND SALARIES."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the Chief of the Police Department by striking out the numerals 2500 and inserting in place thereof the numerals 3000.

As amended the line will read as follows:

Chief of Police Department $3,000

Approved December 31, 1919.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "DUTIES AND SALARIES."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of Superintendent of Streets by striking out the numerals 2500 and inserting in place thereof the numerals 3000.

As amended the line will read as follows:

Superintendent of Streets $3,000

Approved December 31, 1919.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "DUTIES AND SALARIES."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of Superintendent of Public Buildings by striking out the numerals 2500 and inserting in place thereof the numerals 2800.

As amended the line will read as follows:

Superintendent of Public Buildings $2,800

Approved December 31, 1919.

AN ORDINANCE IN AMENDMENT OF AN ORDINANCE ENTITLED "DUTIES AND SALARIES."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line

relating to the salary of Clerk of Committees by striking out the numerals 2400 and inserting in place thereof the numerals 2800.

As amended the line will read as follows:

Clerk of Committees $2,800

Approved December 31, 1919.

An Ordinance In Amendment of An Ordinance Entitled "Duties and Salaries."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of the City Electrician by striking out the numerals 2500 and inserting in place thereof the numerals 2800.

As amended the line will read as follows:

City Electrician $2,800

Approved December 31, 1919.

An Ordinance In Amendment of An Ordinance Entitled "Duties and Salaries."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salaries of Assessors by striking out the numerals 2500 and inserting in place thereof the numerals 2800.

As amended the line will read as follows:

Assessors, each $2,800

Approved December 31, 1919.

An Ordinance In Amendment of An Ordinance Entitled "Duties and Salaries."

Be it ordained by the City Council of the City of Cambridge as follows.

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of City Messenger by striking out the numerals 1800 and inserting in place thereof the numerals 2200.

As amended the line will read as follows:

City Messenger $2,200

Approved December 31, 1919.

An Ordinance Establishing Salaries of Memrers of the Fire Department

Be it ordained by the City Council of the City of Cambridge as follows:

To take effect March 1, 1920, the salaries for members of the Fire Department shall be fixed and established as follows, viz:

Deputy Chief of Fire Department	$2,500 00
Captains	2,350 00
Lieutenants	2,150 00
Enginemen	2,000 00
Assistant Enginemen	1,950 00
Privates, first 12 months' service	1,460 00
Privates, second 12 months' service	1,581 67
Privates, third 12 months' service	1,703 33
Privates, after three years' service	1,825 00

Approved December 12, 1919.

An Ordinance In Amendment of An Ordinance Entitled "Duties and Salaries."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended in the line relating to the salary of Sealer of Weights and Measures by striking out the numerals 2000 and inserting in place thereof the numerals 2100.

As amended the line will read as follows:

Sealer of Weights and Measures	$2,100

Approved December 31, 1919.

An Ordinance In Amendment of An Ordinance Entitled "Duties and Salaries."

Be it ordained by the City Council of the City of Cambridge as follows:

Section 30 of Chapter 28 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby further amended by striking out the lines pertaining to Deputy Sealers of Weights and Measures and Inspectors and inserting in place thereof the following lines:

One Deputy Sealer of Weights and Measures, who shall act as inspector	$1,800

Two Deputy Sealers of Weights and Measures, each. 1,750

Approved March 31, 1920.

An Ordinance In Amendment of An Ordinance Entitled: Sealer of Weights and Measures

Be it ordained by the City Council of the City of Cambridge as follows:

Chapter 22 of the Revised Ordinances of 1892, as amended to November 8, 1899, is hereby amended by striking out the said Chapter and inserting in place thereof the following:

Chapter 22

Sealer of Weights and Measures

Section 1. The Sealer of Weights and Measures Department shall be under the charge of the Sealer of Weights and Measures. The Department shall consist of a Sealer of Weights and Measures and three Deputy Sealers of Weights and Measures, one of whom shall act as Inspector.

The Sealer of Weights and Measures shall have general control and supervision of all the public scales in the city and, in case of his absence or inability to perform his duties from any cause, an inspector shall exercise such duties.

In the month of April he shall make a full report of all matters pertaining to the Department, with an inventory of all property of the city under his charge.

Approved March 31, 1920.

An Ordinance In Amendment of An Ordinance Governing the Construction, Alteration, Removal, Equipment, etc., of Buildings.

Be it ordained by the City Council of the City of Cambridge as follows:

Division 3, Section 12, of the Building ordinances is hereby amended by adding after the ninth paragraph the following:

"In buildings not more than one story in height, girders, trusses, beams, publins and bracing carrying only roof-load need not be fire proofed."

Approved April 15, 1920.

An Ordinance In Relation To the Board of License Commissioners

Be it Ordained by the City Council of the City of Cambridge as follows:

The Board of License Commissioners is hereby authorized to appoint an Inspector of Garages and Fire Prevention whose duty shall be to act under the authority and direction of said Board in the inspection of all premises which it may be intended to use for the purchase, storage, sale, barter or exchange of rags, cotton, feathers, paper stock, excelsior, straw or other inflammable junk so as to determine for said Board the exact condition of such premises and whether or not such conditions may be in agreement with the provisions of the statutes of the Commonwealth or Ordinances of the City; also to perform such other service as may be required by the regulations of said Board of License Commissioners.

Approved February 28, 1920.

MAYORS OF THE CITY OF CAMBRIDGE

(From 1846 to 1920 inclusive)

James D. Green	From	May,	1846,	to April,	1848
Sydney Willard	"	April,	1848,	to April,	1851
George Stevens	"	April,	1851,	to April,	1853
James D. Green	"	April,	1853,	to April,	1854
*Abraham Edwards	"	April,	1854,	to January,	1855
Zebina L. Raymond	"	January,	1855,	to January,	1856
John Sargent	"	January,	1856,	to January,	1860
†James D. Green	"	January,	1860,	to July 24,	1861
§Charles Theo Russell	"	July 31,	1861,	to January,	1863
George C. Richardson	"	January,	1863,	to January,	1864
Zebina L. Raymond	"	January,	1864,	to January,	1865
J. Warren Merrill	"	January,	1865,	to January;	1867
Ezra Pamenter	"	January,	1867,	to January,	1868
Charles H. Saunders	"	January,	1868,	to January,	1870
Hamlin R. Harding	"	January,	1870,	to January,	1872
Henry O. Houghton	"	January,	1872,	to January,	1873
Isaac Bradford	"	January,	1872,	to January,	1877
Frank A. Allen	"	January,	1877,	to January,	1878
Samuel L. Montague	"	January,	1878,	to January,	1880
James M. W. Hall	"	January,	1880,	to January,	1881
James A. Fox	"	January,	1881,	to January,	1885
William E. Russell	"	January,	1885,	to January,	1889
Henry H. Gilmore	"	January,	1889,	to January,	1891
Alpheus B. Alger	"	January,	1891,	to January,	1893
William A. Bancroft	"	January,	1893,	to January,	1897
Alvin F. Sortwell	"	January,	1897,	to January,	1899
Edgar R. Champlin	"	January,	1899,	to January,	1901
David T. Dickinson	"	January,	1901,	to January,	1902
John H. H. McNamee	"	January,	1902,	to January,	1904
Augustine J. Daly	"	January,	1904,	to January,	1906
Charles H. Thurston	"	January,	1906,	to January,	1907
*Walter C. Wardwell	"	January,	1907,	to April,	1909
William F. Brooks	"	April,	1909,	to April,	1911
J. Edward Barry	"	April,	1911,	to April,	1914
Timothy W. Good	"	April,	1914,	to Dec.,	1915
Wendell D. Rockwood	"	January,	1916,	to January,	1918
Edward W. Quinn	"	January,	1918,	to	

*Municipal year changed. †Resigned. §First elected by the City Council.

PRESIDENTS OF THE BOARD OF ALDERMEN

1888	Edward W. Hincks
1889	John H. Corcoran
1890	Alvin F. Sortwell
1891	William A. Bancroft
1892	William A. Bancroft
1893	John F. Fairbain
1894	John G. Thorogood
1893	John F. Fairbain
1896	John R. Fairbairn
1897	Russell Bradford
1898	Russell Bradford
1899	Walter C. Wardwell
1900	Walter C. Wardwell
1901	George E. Saunders
1902	James F. Aylward
1903	*John W. Coveney
1903	Timothy W. Good
1904	John W. Coveney
1905	J. Edward Barry
1906	Charles H. Lake
1907	Charles H. Lake
1908	Edward B. James
1909	Edward B. James
1910	Edward B. James
1911	James T. Barrett
1912	James T. Barrett
1913	Peter J. Nelligan
1914	Peter J. Nelligan
1915	Peter J. Nelligan

*John W. Coveney resigned March 10, 1903, and Timothy W. Good elected to the vacancy.

PRESIDENTS OF CITY COUNCIL

1916	Edward J. Dunphy.
1917	Edward J. Dunphy.
1918	Dr. John P. Good.
1919	James T. Barrett.
1920	James T. Barrett.

PRESIDENTS OF THE COMMON COUNCIL

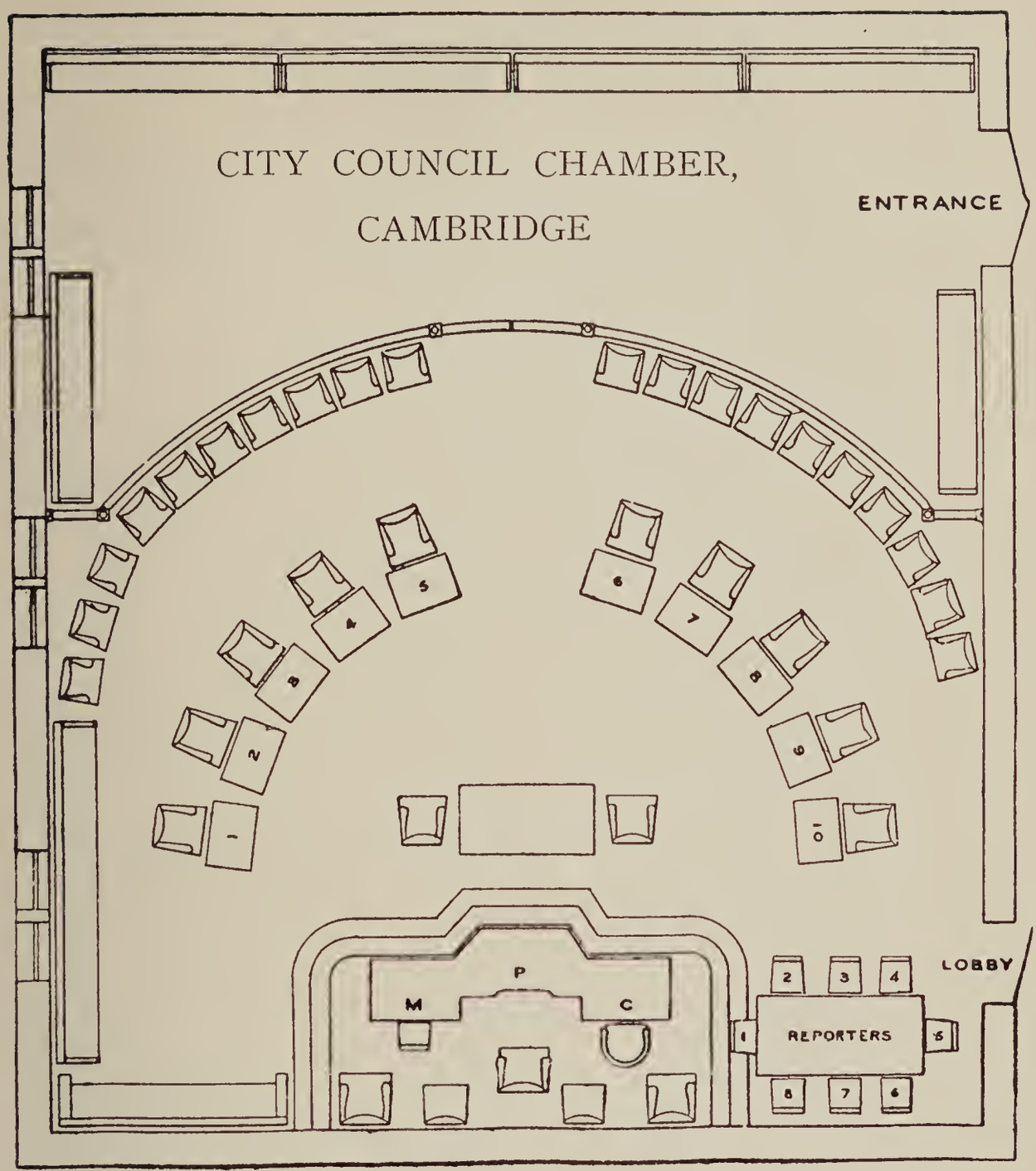
1846	*Isaac Livermore
1847	*John Sargent
1848	*John C. Dodge
1849	*Samuel P. Heywood
1850	*Samuel P. Heywood
1851	*John S. Ladd
1852	*John Sargent
1853	*John Sargent
1854	*John C. Dodge
1855	*Alanson Bigelow
1856	*Ezra Ripley. Resigned January 31
1856	*George S. Saunders Elected January 31
1857	*George S. Saunders
1858	*James C. Fisk
1859	*James C. Fisk
1860	*Hamlin R. Harding
1861	*Hamlin R. Harding
1862	*Jared Shepard. Resigned September 17
1862	*Knowlton S. Chaffee Elected September 24
1863	*George S. Saunders
1864	*George S. Saunders
1865	*John S. March
1866	*John S. March
1867	*Marshall T. Bigelow
1868	*Knowlton S. Chaffee Resigned February 4
1868	*Henry W. Muzzey Elected February 4
1869	*Henry W. Muzzey
1870	*Joseph H. Converse
1871	*Joseph H. Converse
1872	*Alvaro Blodgett
1873	*Alvaro Blodgett Resigned June 17
1873	Francis H. Whitman Elected June 17
1874	George F. Piper
1875	George F. Piper
1876	Frank A. Allen
1877	*Perez G. Porter
1878	*George S. Saunders
1879	*George S. Saunders
1880	*Charles Walker
1881	*Charles Walker
1882	George H. Howard
1883	George H. Howard
1884	George H. Howard
1885	Cornelius G. H. Bennink
1886	John H. Corcoran
1887	John H. Corcoran
1888	*Alvin F. Sortwell
1889	*Edward A. Bingham
1890	*Edward A. Bingham
1891	Edward C. Wheeler
1892	Herbert A. Chase
1893	J. Henry Russell
1894	Charles M. Conant
1895	*John L. Odiorne
1896	*John L. Odiorne
1897	Albert S. Apsey
1898	George S. Saunders
1899	William F. Brooks

1900	John D. Merrill
1901	John D. Merrill
1902	*Thorndike Spalding
1903	Edward E. Clark
1904	Harry N. Stearns
1905	George A. Giles
1906	George A. Giles
1907	*Henry C. Stetson
1907	*†Robert W. Hunter
1908	Henry J. Winslow
1909	Jesse W. Moreland
1910	Irving N. Linnell
1911	Frederick H. Burke
1912	Timothy J. Horan
1913	John H. Lynch
1914	Frank J. Lehan
1915	Arthur S. Browne

*Deceased.
†Elected to fill vacancy.

LEGAL HOLIDAYS

New Year's Day, January 1. Washington's Birthday, February 22. Patriots' Day, April 19. Memorial Day, May 30. Independence Day, July 4. Labor Day, September 1. Columbus Day, October 12. Thanksgiving Day, November 27. Christmas Day, December 25.



KEY TO CITY COUNCIL CHAMBER

Cambridge, 1919

P—JAMES T. BARRETT, President

1.	Councillor	Apted	8	Councillor	Lehan
2.	"	Lynch	9.	"	Good
3.	"	Feeley	10.	"	Stratton
4.	"	Anderson	11.	"	Mullett
5.	"	Shea	12.	"	Corkery
6.	"	Coady	13.	"	McCarthy
7.	"	Hogan	14.	"	Bradbury

Reporters

1. James W. Bean, Boston Globe and Cambridge Chronicle.
2. Harry J. Mahoney, Cambridge Sentinel.
3. Edward J. Sennott, Cambridge Recorder.
4. J. Lee Robinson, Cambridge Tribune.

CITY GOVERNMENT

Mayor

EDWARD W. QUINN

Councillors

President

JAMES T. BARRETT

Hugh G. Anderson	79	Trowbridge Street	At Large
Charles R. Apted	31a	Sacramento Street	Ward 10
James T. Barrett	97	Otis Street	At Large
Matthew J. Corkery	261	Mt. Auburn Street	Ward 9
Harold M. Bradbury	160	Chestnut Street	Ward 6
Francis David Coady	154	Webster Avenue	Ward 3
Martin A. Feeley	265	Western Avenue	Ward 7
John P. Good	106	Oxford Street	At Large
William M. Hogan	108	Fifth Street	Ward 2
Frank J. Lehan	75	Thorndike Street	Ward 1
William J. Lynch	55	Cedar Street	Ward 11
John J. McCarthy	31	Putnam Avenue	At Large
George F. Mullett	19	Worcester Street	Ward 4
Charles H. Shea	65	Putnam Avenue	Ward 8
Ralph R. Stratton	1433	Cambridge Street	Ward 5

Officers of the City Council

City Clerk

EDWARD J. BRANDON

Clerk of Committees

DANIEL J. TOOMEY

City Messenger

A. FRANK MONTGOMERY

Regular meetings on Tuesday evenings, at eight (8) o'clock

STANDING COMMITTEES OF THE CITY COUNCIL

Bonds. Councillors Mullett, Corkery, Apted.

City Engineering. Councillors Lynch, Good, Apted.

City Planning. Councillors Shea, Mullett, Corkery, Apted, Anderson.

Claims. Councillors Good, Anderson, Hogan, McCarthy, Feeley.

Elections and Printing. Councillors Stratton, Feeley, Good, Mullett, Corkery.

Finance. President Barrett, Councillors Lehan, Good, Hogan, Bradbury, Coady, Shea.

Health. Councillors Lehan, Apted, Coady.

Legislative Matters. President Barrett, Councillors Apted, Good, Stratton, Hogan.

Licenses. Councillors Bradbury, Corkery, Apted, Coady, Hogan.

Ordinances. Councillors Lehan, Apted, Bradbury, Anderson, Shea, McCarthy, Mullett.

Parks and Cemeteries. Councillors Anderson, Shea, Lynch, Feeley, Coady.

Public Property and Public Institutions. Councillors Feeley, McCarthy, Good, Mullett, Hogan.

Public Safety. Councillors Apted, Feeley, Coady, Hogan, Shea.

Public Service. Councillors Bradbury, Lynch, Stratton, Anderson.

Roads and Bridges. Councillors Hogan, Bradbury, McCarthy, Feeley, Lynch, Coady, Anderson.

Rules and Orders. Councillors Shea, Good, Stratton, Apted.

Soldiers' Aid. Councillors McCarthy, Mullett, Lynch, Lehan, Hogan.

Water Supply. Councillors McCarthy, Anderson, Coady, Bradbury, Lynch.

Wires and Lamps. Councillors Coady, McCarthy, Anderson, Hogan, Apted.

SPECIAL COMMITTEES

On Matters Referred from Last City Council. Councillors Lynch, Feeley and Shea.

On Topics in Mayor's Address. Councillors Lehan, Stratton and Good.

On Memorial to Deceased Soldiers and Sailors. Councillors Lehan, McCarthy, Shea, Feeley and Apted.

On *Public Markets.* Councillors Apted, Feeley and Bradbury.

On Americanization. Councillors Lehan, Feeley and Shea

On Independence Day. Councillors Hogan, Feeley, Bradbury, Stratton and Lynch.

On Investigation of Police Department Expenditures. Councillors Apted, Corkery, Lynch, Feeley and Shea.

On Municipal Lighting. Councillors Lehan, McCarthy and Apted.

On Decease of President McLaurin of Massachusetts Institute of Technology. Councillors McCarthy, Lehan and Feeley.

On Monument to Spanish War Veterans. Councillors Apted, Hogan and Corkery.

On Industrial and Homestead Development. Councillors Apted, Hogan and Corkery.

On Decease of Charles H. Gaffney. Councillors Lehan, Mullett and McCarthy.

On Opening of Ward 8 Playground. Councillors Shea, McCarthy and Anderson.

On Enforcement of Laws on Rent Profiteering. President Barrett and Councillors Stratton, Good, Feeley and Hogan.

On Public Meetings on Public Reservations. Councillors Stratton, Feeley and Good.

On Abolition of Unpaid Boards. Councillors Shea, Mullett and McCarthy.

On Observance of 75th Anniversary of Cambridge as a City. His Honor, the Mayor, and the City Council.

On Reception to General Pershing on Memorial Day. Councillors Apted, Hogan and Stratton.

On Abolition of Grade Crossings. Councillors Lehan, Anderson and Bradbury.

On Removal of Poles and Overhead Wires. Councillors Bradbury, Anderson and Lehan.

On Investigation of Prices for Ice and Establishing a Municipal Ice Plant. Councillors Lynch, Mullett and Hogan.

DEPARTMENTS AND BOARDS

City Hall Telephone, 6800 Cambridge

EXECUTIVE DEPARTMENT

EDWARD W. QUINN, *Mayor*

EDWARD A. COUNIHAN, *Mayor's Clerk*

Office Hours: 8 a. m. to 4 p. m.

Office, Rooms 17 and 18, City Hall.

CITY CLERK DEPARTMENT

EDWARD J. BRANDON, *City Clerk*

THOMAS J. CONRICK, *Assistant City Clerk*

Office Hours: 8 a. m. to 4 p. m.

Office, Rooms 8 and 9, City Hall.

TREASURY DEPARTMENT

HENRY F. LEHAN, *City Treasurer and Collector of Taxes*

Office Hours: 8 a. m. to 2 p. m.

Office, Rooms 3 and 4, City Hall.

AUDITING DEPARTMENT

CHARLES H. THURSTON, *City Auditor*

Office Hours: 8 a. m. to 4 p. m.

Office, Rooms 1 and 2, City Hall.

CLERK OF COMMITTEES DEPARTMENT

DANIEL J. TOOMEY, *Clerk of Committees*

ALBERT T. DOYLE, *Assistant*

Office Hours: 8 a. m. to 4 p. m.

Office, Room 16, City Hall.

CITY MESSENGER DEPARTMENT

A. FRANK MONTGOMERY, *City Messenger*

HENRY P. CONROY, *Assistant*

Office Hours: 8 a. m. to 4 p. m.
Office, Room 20, City Hall.

LAW DEPARTMENT

PETER J. NELLIGAN, *City Solicitor*

Office Hours (at City Hall): 8 a. m. to 12 m.
Office, Room 17, City Hall.

Boston Office, 747 Tremont Building Telephone 2260, Haymarket

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ENGINEERING DEPARTMENT

LEWIS M. HASTINGS, *City Engineer*

THOMAS P. O'NEIL, *Superintendent of Sewers*

Office Hours: 8 a. m. to 5 p. m.
Office, Rooms 30 and 31, City Hall.

INSPECTION, ETC., OF BUILDINGS DEPARTMENT

JEREMIAH F. DOWNEY, *Superintendent of Public Buildings and Inspector of Buildings*

WILLIAM D. COLLINS, WILLIAM J. O'CONNOR } *Building Inspectors*

WILLIAM A. FORD, *Inspector of Plumbing*

WILLIAM J. STANGER, *Gas Inspector*

Office Hours: 8 a. m. to 4 p. m.
Office, Room 28, City Hall.

STREET DEPARTMENT

EDWARD J. DUNPHY, *Superintendent of Streets*

JOHN H. HOLT, *Clerk*

Office Hours: 8 a. m. to 4 p. m.
Office, Room 12, City Hall.

HEALTH DEPARTMENT—BOARD OF HEALTH

Elie H. La Pierre, *Chairman*	Term, three years
Jeremiah S. Sullivan	Term expired 1918
Dr. Harrie M. Gardiner	Term expired 1919
Elie H. La Pierre	Term expires 1920

Mary M. Crane, *Secretary* — John D. Crowley, *Clerk*

Walter C. Feeley, M.D., *Bacteriologist*

William A. Noonan, M.D., *Inspector of Milk*

Joseph L. Johnson, *Inspector of Provisions*

Office Hours: 8 a. m. to 4 p. m.
Rooms 25 and 26, City Hall.

POLICE DEPARTMENT

John J. McBride, *Chief*
Telephone 423

FIRE DEPARTMENT

James M. Casey, *Chief*
Telephone 109

ASSESSORS' DEPARTMENT

John C. Haverty, *Chairman* — James J. Casey, *Secretary*

Term, three years

John C. Haverty	Term expires 1920
James J. Casey	Term expires 1921
Bernard F. Fallon	Term expires 1922

Carrie A. Estes and Ruth E. McGuigan, *Clerks*

Office Hours: 8 a. m. to 4 p. m.
Office, Rooms 21 and 22, City Hall.

CITY ELECTRICAL DEPARTMENT

TIMOTHY C. O'HEARN, *City Electrician*

Office Hours: 8 a. m. to 4 p. m.
Office, Central Fire Alarm, Inman Square Building
Telephone 125

INSPECTION OF ANIMALS DEPARTMENT

DAVID L. BOLGER, M.D.V., *Inspector of Animals*

Residence 35 Ash Street Telephone 3550

(No Office or Hours)

BRIDGE DEPARTMENT

FRANCIS J. SMITH, *Bridge Commissioner*

Office Hours: 8 a. m. to 4 p. m.
Office, Room 12, City Hall.

SEALER OF WEIGHTS AND MEASURES DEPARTMENT

FELIX C. MCBRIDE, *Sealer*

HUGH H. HEALEY, *Deputy Sealer and Inspector.*
EMERY T. MORRIS and JOSEPH O'NEIL, *Deputy Sealers*

Office Hours: Fridays, 8 a. m. to 4 p. m.
Saturdays, 8 a. m. to 12 m.

Office, Brattle Square Building Telephone 509-W

CITY PHYSICIAN

WILLIAM G. BROUSSEAU

Residence, 2343 Massachusetts Avenue Telephone 1285

Office, Central Square Building.
Office Hours: Daily, 9 to 11 a. m.
Telephone 660

FENCE VIEWERS

LEWIS M. HASTINGS, City Hall JEREMIAH F. DOWNEY, City Hall

CAMBRIDGE PLANNING BOARD

WILLIAM F. HARRIS, *Chairman*	ARTHUR C. COMEY, *Secretary*
JAMES J. HILL	Term expired 1919
ROBERT E. MARTIN	Term expires 1920
BENJAMIN ROSEMAN	Term expires 1921
WALTER F. EARLE	Term expires 1922
WILLIAM F. HARRIS	Term expires 1923

SCHOOL COMMITTEE

Mayor, EDWARD W. QUINN, *Chairman*

CHARLES F. J. MCCUE, *Vice-Chairman*

JOHN F. GADSBY, 14 Chilton Street . .	Term expires 1920
MARY A. WINSLOW, 152 Magazine Street .	Term expires 1920
CHARLES F. J. MCCUE, 30 Lee Street . .	Term expires 1921
DR. ARTHUR L. MILES, 12 Magazine Street .	Term expires 1921
NORA J. DRISCOLL, 1200 Mass. Ave. . .	Term expires 1922
JAMES S. CASSEDY, 356 Harvard Street .	Term expires 1922

MARY F. WALSH, *Secretary*

Business Agent

CONSTANTINE J. CHURCH

Superintendent of Schools

MICHAEL E. FITZGERALD

CHARLES M. HERLIHY, *Assistant*

Office Hours: 8 a. m. to 4 p. m.
Office, Rooms, 13, 14 and 15, City Hall.

CEMETERY DEPARTMENT CEMETERY COMMISSIONERS

TIMOTHY F. MCCARTHY, *Chairman*

Term, Three Years

JOHN MCKENZIE	Term expires 1921
GEORGE T. QUINN	Term expires 1921
JEREMIAH J. SULLIVAN	Term expires 1922
TIMOTHY F. MCCARTHY	Term expires 1922

THOMAS E. WILLIAMS . . . . . Term expires 1923
EBEN H. GOOGINS . . . . . Term expires 1923

Clerk of the Board
EDWARD J. BRANDON
Office, Rooms 8 and 9, City Hall.

Superintendent of the Cemetery
THOMAS J. CAVANAGH

Clerk of the Cemetery
JOHN J. MCKENZIE
Office Hours: at Cemetery, 8 a. m. to 5 p. m.
Office at Cemetery on Coolidge Avenue
Telephone 5

Person to Cause to be Properly Interred the Bodies of Soldiers and Sailors
EDWARD F. SULLIVAN
Office, Room 23, City Hall.

PUBLIC LIBRARY DEPARTMENT

Trustees of Cambridge Public Library

JOHN A. BUTLER, *President*
For One Year
CHARLES F. J. MCCUE of School Committee
Citizens at Large. Term, Three Years

NELLIE F. CROWLEY . . . . . Term expires 1920
ROBERT E. YOUNG . . . . . Term expires 1921
EDWARD P. COLLIER . . . . . Term expires 1921
EDWARD REDSTONE . . . . . Term expires 1922
ALBERT E. LYNCH . . . . . Term expires 1922
JOHN A. BUTLER . . . . . Term expires 1923

NELLIE F. CROWLEY, *Secretary* ALBERT E. LYNCH, *Treasurer*

T. HARRISON CUMMINGS, *Librarian*

Library open: 9 a. m. to 9 p. m. Reading Room: 9 a. m. to 9 p. m. Sunday, 2 to 9 p. m.

Office at Library Building, Broadway, Irving and Trowbridge Streets. Telephone 610

CITY HOSPITAL DEPARTMENT

Trustees of Cambridge City Hospital

CHARLES S. CAHILL, *Chairman*

CHARLES H. THOMAS	Term expires 1921
CHARLES S. CAHILL	Term expires 1922
JOHN H. HURLEY	Term expires 1923
ISAAC MCLEAN	Term expires 1924
FRANK F. ROGERS	Term expires 1925

WATER WORKS DEPARTMENT

Cambridge Water Board

JAMES J. SCULLY, *President*

Term, Five Years

JOHN F. O'BRIEN	Term expired 1918
JOSEPH E. DOHERTY	Term expired 1919
BERNARD E. MCDERMOTT	Term expires 1920
JAMES J. SCULLY	Term expires 1920
JOHN P. CONROY	Term expires 1921

WALTER H. HARDING, *Clerk of the Board*

TIMOTHY W. GOOD, *Superintendent of Water Works*

WALTER H. HARDING, *Registrar*

Office Hours: 8 a. m. to 4 p. m.
Office, Rooms 5 and 6, City Hall.

REGISTRARS OF VOTERS

J. FRANK FACEY, *Chairman*

Term, Four Years

HARRY A. PENNIMAN	Term expires 1921
J. FRANK FACEY	Term expires 1922

Charles J. Wood	Term expires 1923
John P. McCormick	Term expires 1924

Charles J. Wood, *Clerk*

Office at Central Square Building

Telephone 1027

PARK DEPARTMENT

Park Commissioners

John J. Ahern, *President*

Term, Five Years

Stephen H. Harrington	Term expires 1920
John F. Sullivan	Term expires 1921
Carroll W. Doten	Term expires 1922
John J. Ahern	Term expires 1923
Allen W. Jackson	Term expires 1924

Rose E. Manning, *Secretary*

John F. Donnelly, *General Superintendent*

Office Hours: 8 a. m. to 4 p. m.
Office, Room 11, City Hall.

SINKING FUND DEPARTMENT

Commissioners of the Sinking Fund

George G. Wright, *Chairman*

Term, Three Years

Herbert M. Bridey	Term expires 1920
George S. R. McLean	Term expires 1920
George G. Wright	Term expires 1921
Gustavus Goepper	Term expires 1921
Daniel Cronin	Term expires 1922
Francis J. Carney	Term expires 1922

William J. Hopkins, *Secretary* Henry F. Lehan, *Treasurer*

OVERSEERS OF THE POOR DEPARTMENT

Overseers of the Poor

JOHN R. MCCOOL, *Chairman*

Term, Five Years

EDMUND A. WHITMAN	Term expires 1921
JOHN J. CORKERY	Term expires 1921
BERNARD B. WELCH	Term expires 1922
GEORGE D. COLGAN	Term expires 1922
CHARLES J. WILLIAMS	Term expires 1923
GEORGE P. O'BRIEN	Term expires 1924
JOHN R. MCCOOL	Term expires 1925

JAMES E. FINNEGAN, *Secretary*

JOHN T. SHEA, *Superintendent of City Home*

Office Hours, at Central Square Building, 8 a. m. to 4 p. m

Telephones { Office, 660. / City Home, 198.

BOARD OF APPEAL

CLARENCE H. BLACKALL, *Chairman*

Term, Three Years

CLARENCE H. BLACKALL (Architect)

JOHN B. BYRNE (Master Builder)

HARRY N. STEARNS

BOARD OF LICENSE COMMISSIONERS

WILLIAM F. BROOKS, *Chairman*

Term expires 1922

JAMES M. CASEY, Chief of Fire Department

JOHN J. MCBRIDE, Chief of Police Department

AGENT FOR COMMITTEE ON SOLDIERS' AID

EDWARD F. SULLIVAN

Office Hours: 8 a. m. to 4 p. m.

Office, Room 23, City Hall.

TRUSTEES OF THE DOWSE INSTITUTE

FRANCIS G. PEABODY, *President*

EDWARD W. QUINN, Mayor, *ex-officio*

JAMES T. BARRETT, Pres. of City Council, *ex-officio*

GEORGE HOWLAND COX — JOSEPH H. BEALE, JR.

FRANCIS G. PEABODY

JOSEPH H. BEALE, JR., *Secretary-Treasurer*

TRUSTEES OF THE SANDERS TEMPERANCE FUND

EDWARD W. QUINN, Mayor

JAMES T. BARRETT, President of City Council

EDWARD J. BRANDON, City Clerk

Ex-officiis

TRUSTEES OF THE BRIDGE CHARITABLE FUND

EDWARD W. QUINN, Mayor

JAMES T. BARRETT, President of City Council

JOHN R. MCCOOL, Chairman of Overseers of Poor

Ex-officiis

CIVIL SERVICE—LABOR DIVISION

HARRY L. LINCOLN, *Registration Clerk*

Office Hour: 4 p. m., daily

Except Saturday

MEASURERS OF GRAIN

EMERY T. MORRIS — FELIX C. MCBRIDE

HUGH H. HEALEY — JOSEPH O'NEIL

SURVEYOR OF MECHANICS' WORK

CHARLES A. MASON

KEEPER OF LOCK-UPS

JOHN J. MCBRIDE

CONSTABLES

(With power to serve civil process)

John Abramawicz
Charles S. Auteomaso
Colin A. Campbell
Gilmore B. Creelman
Frederick L. Donovan
Albert Gertson
John V. Holland
James E. Lennon
Frank C. Levins
Charles E. McCarthy
George J. McNamara
Frank E. Morris
Walter E. Potter
William J. Robinson
Pacy Welch

(Without power to serve civil process)

William J. Allen
Charles R. Apted
Deming E. Badger
Patrick A. Berkeley, Jr.
Frank L. Bowie
William F. Boyle
James J. Brennan
Charles Bunyon
Lucian S. Cabot
Timothy A. Callahan
Patrick L. Carroll
William J. Cogan
John F. Connelly
J. Joseph Corcoran
Thomas F. Cosgrove
Philip Diehl
Frank E. Donelan
William F. Donovan
George Dunn
James E. Durnan
Charles Emerson
Eugene M. Flanagan
Mortimer F. Flanagan
Michael J. Flynn
James J. Foley
Thomas M. Ford
Anthony J. Foster
Walter Foster
Albert E. Gaskill
Hiram Gillespie
John Good
James A. Gorman
William H. Gray
John B. Griffin
James P. Harrington
Neil C. Head
Hugh H. Healey
Guy E. Henderson
John Hughes
Thomas A. Hughes
Dennis F. Hurley
Samuel Johnson
Hugh H. Keenan
John J. Kelleher
Mark J. Kelley
James R. Keough

Joseph J. Keough
William N. Letora
Charles A. Lincoln
James Mahady
Felix C. McBride
John J. McGowan
John J. McNamara
Augustus Melvin
Emery T. Morris
Frank E. Morris
Hugh G. Mullen
Timothy E. Murphy
John P. Nelligan
John T. O'Connell
Thomas J. O'Connor
Joseph M. O'Neil
John F. Patton
William H. Porter
John J. Reagan
Michael Regan
James D. Reddin
John J. Roach
John T. Shea
James H. Shuckrowe
Francis R. Skinner
Carl E. Stowe
John J. Sullivan
Daniel C. Sweeney
Frank P. Tobin
James T. Twohig
John Tukey
Edward F. Wadden
Edward F. Walsh
Dennis J. White
Stephen . Whitlock

PERSON TO RECEIVE INFORMATION OF DAMAGE BY DOGS

(*Ch.* 102, *Sect.* 151, *Revised Laws.*)

JOHN J. MCBRIDE

POUND KEEPERS

JAMES F. GRAY
JOHN J. TOOMEY

COMMITTEE FOR THE PRESERVATION OF FISH

THOMAS P. O'NEIL

INSPECTORS OF JUNK SHOPS

Pawnbrokers' Shops and Second-Hand Stores and Dealers

JOHN J. MCBRIDE
JAMES E. MURRAY
JAMES M. KEANEY
HERBERT GORDON
PATRICK J. HURLEY
MICHAEL J. BRENNAN
JOHN J. CANNEY

HAY WEIGHERS

FRANK W. BARTLETT
WILLIAM N. NEALLY
GEORGE M. DAVID
JOHN N. BOLSTER

INSPECTOR OF PRESSED OR BUNDLED HAY OR STRAW

HARVEY O. TITUS

PUBLIC WEIGHERS

Francis E. Bailey
Annie S. Blanchard
Henry Boston
Ernest E. Bradbury
Harry Butland
William A. Cheyne

Theodore P. Clark
Dennis T. Coffey
Ernest Croake
Clyde E. Crozier
Alexander H. Cunha
Leonard Day
William H. Delaney
James H. Fairclough
John E. Fay
Frank Finnick
Alexander S. Ford
Minnie E. Galvin
Philip C. Galvin
Thomas Gibson
James B. Harris
John P. Healy
Robert Holden
John H. Holt
James Knowles
Neil Macdonald
Edward A. Mahoney
William Maloney
Walter G. Martin
Charles McCabe
Melvin McFarland
Charles A. McGlaugflin
Martin McMahon
Harry Meehan
Thomas Malloy
Otto Otterson
August Pawlowski
George S. Penney
Joseph B. Quinn
John F. Reilly
Manuel M. Rogers
Alexander Russell
Thomas E. Sewell
John M. Thayer
John J. Toomey
James J. Travers
William H. Tupper
Lawrence J. Toomey
William Varney
Orne Vose
James A. Whelan

VOTES CAST AT

State Election, November 4, 1919

Municipal Election, December 2, 1919

		GOVERNOR							LIEUTENANT-GOVERNOR						SECRETARY					
		WHOLE NUMBER OF BALLOTS CAST	Calvin Coolidge, of Northampton. Republican.	Charles B. Ernst, of Worcester. Prohibition.	William A. King, of Springfield. Socialist.	Richard H. Long, of Framingham. Democratic.	Ingvar Paulsen, of Boston. Socialist Labor.	Blank.	Charles J. Brandt, of Brockton. Socialist.	Channing H. Cox, of Boston. Republican.	H. Edward Gordon, of Boston. Prohibition.	John F. J. Herbert, of Worcester. Democratic	Patrick Mulligan, of Boston. Socialist Labor.	Blank.	Harry W. Bowman, of Boston. Prohibition.	James Hayes, of Plymouth. Socialist Labor.	Albert P. Langtry of Springfield. Republican	Charles H. McGlue, of Lynn. Democratic.	Herbert H. Thompson, of Haverhill. Socialist.	Blank.
Ward 1	Prec. 1	185	23	0	0	161	0	1	2	22	0	155	2	4	2	2	25	150	1	5
	" 2	263	80	1	0	181	1	0	6	43	2	196	3	13	1	3	48	173	2	36
	Totals	448	103	1	0	342	1	1	8	65	2	351	5	17	3	5	73	323	3	41
Ward 2	Prec. 1	295	41	0	2	250	0	2	5	31	1	236	6	16	4	6	30	231	3	21
	" 2	244	29	0	3	204	2	6	3	25	0	201	2	13	2	2	20	197	0	23
	Totals	539	70	0	5	454	2	8	8	56	1	437	8	29	6	8	50	428	3	44
Ward 3	Prec. 1	192	27	0	2	159	1	3	2	21	1	150	2	16	3	4	24	141	2	18
	" 2	186	16	1	2	163	1	3	4	18	3	151	2	8	0	5	13	146	6	16
	" 3	287	56	2	1	225	1	2	1	52	5	220	2	7	5	0	53	215	0	14
	" 4	249	61	0	4	181	0	3	4	52	2	175	3	13	4	4	50	169	2	20
	Totals	914	160	3	9	728	3	11	11	143	11	696	9	44	12	13	140	671	10	68
Ward 4	Prec. 1	136	35	1	1	95	0	4	1	30	2	87	2	14	3	2	27	86	0	18
	" 2	310	109	0	5	193	0	3	10	94	2	192	5	7	4	5	90	180	12	19
	" 3	261	104	2	1	148	1	5	6	103	2	133	2	15	7	3	104	125	6	16
	" 4	363	186	1	4	168	2	2	7	177	1	168	1	9	5	3	173	155	5	22
	Totals	1070	434	4	11	604	3	14	24	404	7	580	10	45	19	13	394	546	23	75
Ward 5	Prec. 1	357	94	1	1	258	0	3	2	85	5	242	5	18	4	2	81	235	4	31
	" 2	382	153	0	1	223	0	5	7	126	4	230	3	12	4	2	135	210	4	27
	" 3	588	360	0	0	218	1	7	5	317	1	249	3	13	6	2	323	229	3	25
	" 4	430	336	1	1	90	0	2	2	320	1	101	1	5	11	0	313	89	3	14

Ward 6	Prec. 1	245	120	0	5	115	2	3	13	111	4	97	2	18	6	5	112	89	10	23
	" 2	339	207	1	4	122	2	8	54	161	5	107	6	6	9	3	205	98	9	15
	" 3	391	196	1	7	179	3	5	6	175	2	186	7	15	7	8	176	171	8	21
	" 4	528	341	0	6	176	2	3	9	334	4	161	2	18	9	5	340	143	7	24
	Totals	1503	864	2	22	592	9	14	82	781	15	551	17	57	31	21	833	501	34	83
Ward 7	Prec. 1	384	213	0	5	162	0	4	11	198	0	167	4	4	6	8	199	156	7	8
	" 2	395	204	1	2	181	2	15	4	198	2	178	5	8	10	4	189	160	4	28
	" 3	457	336	0	1	110	1	9	5	335	2	105	3	7	14	3	325	91	2	22
	" 4	373	187	1	3	174	1	7	12	181	5	148	7	20	8	7	178	140	11	29
	Totals	1609	940	2	11	627	4	25	32	912	9	598	19	39	38	22	891	547	24	87
Ward 8	Prec. 1	484	298	0	2	181	0	3	4	279	4	182	4	11	7	1	280	169	3	24
	" 2	439	322	1	3	111	0	2	4	298	1	121	3	12	5	2	301	112	3	16
	" 3	368	83	0	2	277	2	4	5	74	1	263	3	22	6	2	70	255	4	31
	Totals	1291	703	1	7	569	2	9	13	651	6	566	10	45	18	5	651	536	10	71
Ward 9	Prec. 1	540	417	0	0	121	0	2	3	397	2	132	0	6	3	1	403	117	3	13
	" 2	496	297	2	2	190	1	4	6	271	3	201	1	14	3	3	277	190	4	19
	" 3	528	319	0	1	203	2	3	4	297	2	212	2	11	4	3	295	197	4	25
	" 4	267	92	0	0	167	2	6	4	86	0	166	2	9	3	1	86	152	4	21
	Totals	1831	1125	2	3	681	5	15	17	1051	7	711	5	40	13	8	1061	656	15	78
Ward 10	Prec. 1	474	379	1	1	89	0	4	5	356	1	104	0	8	3	2	353	101	3	12
	" 2	458	378	0	0	73	7	0	2	361	1	85	1	8	0	2	362	77	0	17
	" 3	385	130	2	2	249	0	2	3	118	2	246	1	15	5	2	122	234	0	22
	Totals	1317	887	3	3	411	7	6	10	835	4	435	2	31	8	6	837	412	3	51
Ward 11	Prec. 1	550	315	0	6	224	0	5	8	297	0	229	6	10	4	2	290	226	4	24
	" 2	582	185	2	7	377	1	10	8	165	3	380	7	19	8	15	162	363	8	26
	" 3	450	120	2	2	316	0	10	2	115	2	294	9	28	4	4	115	280	5	42
	Totals	1582	620	4	15	917	1	25	18	577	5	903	22	57	16	21	567	869	17	92
Grand Totals		13,861	6849	24	91	6714	38	145	239	6323	78	6650	119	452	189	128	6349	6252	156	787

STATE ELECTION, NOVEMBER 4, 1919—(Continued)

		TREAS. and RECEIVER GENERAL						AUDITOR						ATTORNEY-GENERAL					
		Fred J. Burrell, of Medford. Republican.	David Craig, of Milford. Socialist Labor.	Charles D. Fletcher, of Somerville. Prohibition.	Louis Marcus, of Boston. Socialist.	Chandler M. Wood, of Winchester. Democratic.	Blank.	Arthur J. B. Cartier, of Fall River. Democratic.	Alonzo B. Cook, of Boston. Republican.	Oscar Kinsalas, of Springfield. Socialist Labor.	Walter P. J. Skahan, of Springfield. Socialist.	Henry J. D. Small, of Boston. Prohibition.	Blank.	J. Weston Allen, of Newton. Republican.	Morris I. Becker, of Chelsea. Socialist Labor.	Joseph A. Conry, of Boston. Democratic.	Conrad W. Crooker, of Melrose. Prog. Prohib. Ind.	William R. Henry, of Lynn. Socialist.	Blank.
Ward 1	Prec. 1	33	1	0	0	139	12	145	23	0	3	1	13	26	2	147	2	1	7
	" 2	56	2	1	3	162	39	170	46	1	2	0	44	46	3	171	5	1	37
	Totals	89	3	1	3	301	51	315	69	1	5	1	57	72	5	318	7	2	44
Ward 2	Prec. 1	53	5	1	7	204	25	222	33	4	5	1	30	29	5	227	7	3	24
	" 2	40	3	0	5	175	21	196	21	2	0	0	25	18	3	198	3	1	21
	Totals	93	8	1	12	379	46	418	54	6	5	1	55	47	8	425	10	4	45
Ward 3	Prec. 1	41	2	1	1	130	17	141	23	1	2	2	23	23	2	141	2	2	22
	" 2	27	2	4	6	121	26	136	13	2	4	3	28	10	6	136	5	5	24
	" 3	68	3	4	2	189	21	209	46	2	1	2	27	43	3	217	3	2	19
	" 4	70	3	1	6	152	17	168	52	3	3	0	23	51	5	176	2	3	12
	Totals	206	10	10	15	592	81	654	134	8	10	7	101	127	16	670	12	12	77
Ward 4	Prec. 1	34	0	3	0	80	19	82	29	0	1	3	21	27	1	85	3	2	18
	" 2	112	3	2	10	167	16	177	89	2	10	2	30	86	5	180	11	13	15
	" 3	115	2	4	5	117	18	120	105	3	6	5	22	104	4	120	7	5	21
	" 4	186	1	3	4	154	15	151	174	1	6	4	27	172	1	150	15	4	21
	Totals	447	6	12	19	518	68	530	397	6	23	14	100	389	11	535	36	24	75
Ward 5	Prec. 1	95	3	2	5	225	27	228	81	3	3	1	41	79	7	231	9	6	25
	" 2	145	3	5	1	192	36	216	125	0	3	5	33	123	1	211	14	3	30
	" 3	308	2	6	2	243	27	230	316	1	4	1	36	311	2	233	19	2	21
	" 4	294	2	3	2	118	11	109	294	0	2	4	21	302	2	89	14	2	21
	Totals	842	10	16	10	778	101	783	816	4	12	11	131	815	12	764	56	13	97

Ward 6	Prec. 1	132	3	4	12	79	15	90	118	4	7	2	24	122	4	86	5	8	20
	" 2	189	5	3	10	119	13	106	197	5	10	3	18	200	4	102	10	9	14
	" 3	187	7	4	5	164	24	171	173	5	7	3	32	175	5	160	11	7	33
	" 4	338	2	8	8	144	28	146	325	3	8	2	44	328	5	146	12	9	28
	Totals	846	17	19	35	506	80	513	813	17	32	10	118	825	18	494	38	33	95
Ward 7	Prec. 1	192	4	3	8	163	14	158	199	5	5	5	12	198	4	151	12	8	11
	" 2	218	3	2	3	132	37	162	191	4	1	3	34	186	7	166	8	2	26
	" 3	326	5	7	5	98	16	98	324	3	3	4	25	335	8	87	9	2	16
	" 4	202	7	2	8	111	43	129	187	7	6	4	40	181	7	128	19	5	33
	Totals	938	19	14	24	504	110	547	901	19	15	16	111	900	26	532	48	17	86
Ward 8	Prec. 1	227	2	4	3	223	25	187	251	0	2	4	40	275	2	163	13	3	28
	" 2	220	1	2	3	191	22	127	287	0	3	2	20	296	0	115	9	3	16
	" 3	90	6	4	2	226	40	245	75	1	3	1	43	70	3	250	10	0	35
	Totals	537	9	10	8	640	87	559	613	1	8	7	103	641	5	528	32	6	79
Ward 9	Prec. 1	288	0	4	1	234	13	154	359	0	2	2	23	399	0	119	8	3	11
	" 2	156	2	2	5	309	22	226	230	1	3	3	33	272	3	196	3	5	17
	" 3	249	5	3	3	238	30	208	285	1	4	5	25	290	2	208	8	3	17
	" 4	102	1	0	2	136	26	149	82	1	4	2	29	81	2	153	6	2	23
	Totals	795	8	9	11	917	91	737	956	3	13	12	110	1042	7	676	25	13	68
Ward 10	Prec. 1	307	1	1	2	154	9	123	332	1	2	1	15	348	1	105	8	4	8
	" 2	271	2	14	2	159	10	93	337	3	1	1	23	362	0	79	1	2	14
	" 3	127	3	1	2	227	25	230	122	3	1	0	29	118	2	232	4	1	28
	Totals	705	6	16	6	540	44	446	791	7	4	2	67	828	3	416	13	7	50
Ward 11	Prec. 1	295	4	6	5	211	29	222	288	1	5	2	32	290	0	222	10	6	22
	" 2	193	12	5	8	334	30	375	156	8	6	3	34	165	11	361	10	8	27
	" 3	129	5	2	7	259	48	278	110	6	3	2	51	115	7	273	9	3	43
	Totals	617	21	13	20	804	107	875	554	15	14	7	117	570	18	856	29	17	92
Grand Total		6115	117	121	163	6479	866	6377	6098	87	141	88	1070	6256	129	6214	306	148	808

STATE ELECTION, NOVEMBER 4, 1919—(Continued)

		COUNCILLOR Third District			COUNCILLOR Fourth District		SENATOR Second Suffolk			SENATOR Third Middlesex			SENATOR Second Middlesex		
		E. Coleman Brown, of Boston. Republican.	Lewis R. Sullivan, of Boston. Democratic.	Blank.	George B. Wason, of Cambridge. Republican.	Blank.	Joseph Capobianco, of Boston. Republican.	John J. Mahoney, of Boston. Democratic.	Blank.	Arthur D. Healey, of Somerville. Democratic.	Joseph O. Knox, of Somerville. Republican.	Blank.	George H. Carrick, of Cambridge. Republican.	Edward A. Counihan, Jr., of Cambridge. Democratic	Blank.
Ward 1	Prec. 1	22	148	15			22	151	12						
	" 2	42	188	33			39	189	35						
	Totals	64	336	48			61	340	47						
Ward 2	Prec. 1	27	232	36			31	229	35						
	" 2	25	200	19			22	197	25						
	Totals	52	432	55			53	426	60						
Ward 3	Prec. 1				47	145				142	26	24			
	" 2				35	151				147	12	27			
	" 3				86	201				216	45	26			
	" 4				80	169				179	49	21			
	Totals				248	666				684	132	98			
Ward 4	Prec. 1				46	90							34	84	18
	" 2				132	178							90	199	21
	" 3				143	118							118	133	10
	" 4				212	151							177	170	16
	Totals				533	537							419	586	65
Ward 5	Prec. 1				108	249							78	263	16
	" 2				176	206							119	238	25
	" 3				356	232							287	277	24
	" 4				346	84							270	143	17
	Totals				986	771							754	921	82

Ward 6	Prec. 1				145	100						116	116	13
	" 2				227	112						193	131	15
	" 3				208	183						166	199	26
	" 4				367	161						341	162	25
	Totals				947	556						816	608	79
Ward 7	Prec. 1				234	150						210	159	15
	" 2				212	183						179	163	35
	" 3				365	92						318	125	14
	" 4				231	142						190	152	31
	Totals				1042	567						915	599	95
Ward 8	Prec. 1				308	176						244	217	23
	" 2				339	100						277	148	14
	" 3				95	273						118	233	17
	Totals				742	549						639	598	54
Ward 9	Prec. 1				424	116						360	153	27
	" 2				322	174						277	201	18
	" 3				352	176						276	233	19
	" 4				114	153						98	154	15
	Totals				1212	619						1011	741	79
Ward 10	Prec. 1				364	110						320	142	12
	" 2				374	84						337	105	16
	" 3				144	241						142	218	25
	Totals				882	435						799	465	53
Ward 11	Prec. 1				339	211						283	241	26
	" 2				260	322						168	393	21
	" 3				178	277						140	275	35
	Totals				772	810						591	909	82
Grand Totals		116	768	103	7364	5510	114	766	107	684	132	98	5944	5427	589

		REPRESENTATIVES First Middlesex		REPRESENTATIVES Second Middlesex							REPRESENTATIVES Third Middlesex							
		James H. Kelleher, of Cambridge. Democratic.	Blank.	Frederic F. Clauss, of Cambridge. Republican.	James E. Curry, of Cambridge. Democratic.	John F. Daly, of Cambridge. Democratic.	Clarence P. Kidder, of Cambridge. Republican.	John L. McDonald, of Cambridge. Democratic.	Julius Meyers of Cambridge. Republician.	Blank.	Arthur E. Beane, of Cambridge. Republician.	Dennis J. Callahan, of Cambridge. Democratic.	Louis L. Green, of Cambridge. Republician.	John A. Kelleher, of Cambridge. Democratic.	Timothy E. Quinn, of Cambridge. Democratic.	Arthur K. Reding, of Cambridge. Republician.	Blank.
Ward 1	Prec. 1	167	18														
	" 2	207	56														
	Totals	374	74														
Ward 2	Prec. 1	240	55														
	" 2	167	77														
	Totals	407	132														
Ward 3	Prec. 1	143	49														
	" 2	138	48														
	" 3	206	81														
	" 4	181	61														
	Totals	675	239														
Ward 4	Prec. 1			30	94	86	31	84	27	56							
	" 2			76	193	174	88	190	82	127							
	" 3			102	141	122	94	122	95	107							
	" 4																
	Totals			148	173	160	160	165	158	125							
				356	601	542	373	561	362	415							
Ward 5	Prec. 1			62	270	244	59	240	73	123							
	" 2			97	244	218	106	223	104	154							
	" 3			244	269	245	272	233	257	244							
	" 4			38	119	107	274	121	250	181							
	Totals			641	902	814	711	817	684	702							

Ward 6	Prec. 1			113	105	93	105	106	106	107								
	" 2			176	111	99	180	123	179	149								
	" 3			148	173	154	158	188	157	195								
	" 4			283	176	131	320	169	302	203								
	Totals			720	565	477	763	586	744	654								
Ward 7	Prec. 1			172	155	138	189	161	191	146								
	" 2			162	162	152	165	180	190	174								
	" 3			269	105	92	328	127	298	152								
	" 4			164	142	127	187	162	183	154								
	Totals			767	564	509	869	630	862	626								
Ward 8	Prec. 1										269	146	269	176	169	256	167	
	" 2										279	101	276	122	99	279	161	
	" 3										72	190	81	234	227	73	227	
	Totals										620	437	626	532	495	608	555	
Ward 9	Prec. 1										401	92	381	110	93	381	162	
	" 2										265	155	258	176	209	259	166	
	" 3										281	189	264	220	208	264	158	
	" 4										85	136	70	158	153	83	116	
	Totals										1032	572	973	664	663	987	602	
Ward 10	Prec. 1										344	81	325	125	91	329	127	
	" 2										346	67	334	82	76	338	131	
	" 3										112	179	110	229	238	113	174	
	Totals										802	327	769	436	405	780	432	
Ward 11	Prec. 1										278	199	245	239	187	276	226	
	" 2										143	336	139	382	297	151	298	
	" 3										99	240	93	296	221	115	286	
	Totals										520	775	477	917	705	542	810	
Grand Totals		11456	445	2484	2632	2342	2716	2594	2652	2397	2974	2111	2845	2549	2268	2917	2399	

STATE ELECTION, NOVEMBER 4, 1919—(Continued)

		COUNTY COMMISSIONER			ASSOCIATE CO. COMMISSIONER			DISTRICT ATTORNEY		
		Erson B. Barlow, of Lowell. Republican.	Charles J. Barton, of Melrose, Democratic.	Blank.	Frederic P. Barnes, of Newton. Republican.	H. Harding Hale, of Hudson. Republican.	Blank.	William E. Russell, of Cambridge. Democratic.	Nathan A. Tufts, of Waltham. Republican.	Blank.
Ward 1	Prec. 1	22	141	22	49	37	284	87	90	8
	" 2	45	176	42	65	56	405	123	135	5
	Totals	67	317	64	114	93	689	210	225	13
Ward 2	Prec. 1	30	220	45	64	48	478	185	91	19
	" 2	24	184	36	57	52	379	150	76	18
	Totals	54	404	81	121	100	857	335	167	37
Ward 3	Prec. 1	15	137	40	44	27	313	132	44	16
	" 2	9	132	45	33	23	316	126	39	21
	" 3	45	189	53	84	62	428	200	67	20
	" 4	52	164	33	70	50	378	153	79	17
	Totals	121	622	171	231	162	1435	611	229	74
Ward 4	Prec. 1	25	86	25	29	35	198	84	43	9
	" 2	92	177	41	120	87	413	181	107	22
	" 3	105	122	34	129	101	292	116	130	15
	" 4	172	152	39	198	139	389	175	171	17
	Totals	394	537	139	486	362	1292	556	451	63
Ward 5	Prec. 1	74	229	54	110	82	522	229	100	28
	" 2	120	218	44	145	115	504	222	139	21
	" 3	305	227	56	323	257	596	241	330	17
	" 4	301	101	28	320	263	277	130	286	14
	Totals	800	775	182	898	717	1899	822	855	80
Ward 6	Prec. 1	118	96	31	134	98	258	92	133	20
	" 2	198	107	34	215	159	304	126	195	18
	" 3	164	165	62	183	138	461	188	180	23
	" 4	330	142	56	357	258	441	158	341	29
	Totals	810	510	183	889	653	1464	564	849	90
Ward 7	Prec. 1	199	156	29	216	167	385	178	190	16
	" 2	197	157	41	206	167	417	172	196	27
	" 3	330	94	33	343	264	307	115	330	12
	" 4	183	129	61	200	158	388	156	191	26
	Totals	909	536	164	965	756	1497	621	907	81

STATE ELECTION, NOVEMBER 4, 1919—(Continued)

		COUNTY COMMISSIONER			ASSOCIATE CO. COMMISSIONER			DISTRICT ATTORNEY		
		Erson B. Barlow, of Lowell, Republican.	Charles J. Barton, of Melrose, Democratic.	Blank.	Frederic P. Barnes, of Newton, Republican.	H. Harding Hale, of Hudson, Republican.	Blank.	William E. Russell, of Cambridge, Democratic.	Nathan A. Tufts, of Waltham, Republican.	Blank.
Ward 8	Prec. 1	272	170	42	290	238	440	227	239	18
	" 2	295	123	21	311	268	299	148	274	17
	" 3	106	194	68	102	65	569	226	116	26
	Totals	673	487	131	703	571	1308	601	629	61
Ward 9	Prec. 1	396	111	33	411	334	335	182	348	10
	" 2	258	193	45	293	251	448	296	186	14
	" 3	276	215	37	323	251	482	244	265	19
	" 4	79	147	41	100	83	351	134	117	16
	Totals	1009	666	156	1127	919	1616	856	916	59
Ward 10	Prec. 1	342	101	31	349	269	330	133	332	9
	" 2	351	81	26	354	290	272	113	329	16
	" 3	157	192	36	154	124	492	231	125	29
	Totals	850	374	93	857	683	1094	477	786	54
Ward 11	Prec. 1	279	219	52	302	222	576	208	317	25
	" 2	154	363	65	220	187	757	363	197	22
	" 3	133	259	58	162	107	631	272	148	30
	Totals	566	841	175	684	516	1964	843	662	77
Grand Totals		6253	6069	1539	7075	5532	15115	6496	6676	689

STATE ELECTION, NOVEMBER 4, 1919—(Continued)

		QUESTIONS											
		Rearrangement of Constitution			Continuation Schools			Interest on Deposits (Ch. 116, Acts 1919)			Four Percent Beverages		
		Yes	No	Blank	Yes	No	Blank	Yes	No	Blank	Yes	No	Blank
Ward 1	Prec. 1	86	13	86	97	16	72	78	41	66	143	21	21
	" 2	115	21	127	133	20	110	114	35	114	205	31	27
	Totals	201	34	213	230	36	182	192	76	180	348	52	48
Ward 2	Prec. 1	156	45	94	172	19	104	138	66	91	214	43	38
	" 2	113	20	111	137	13	94	78	71	95	190	21	33
	Totals	269	65	205	309	32	198	216	137	186	404	64	71
Ward 3	Prec. 1	79	19	94	94	14	84	78	41	73	144	21	27
	" 2	88	17	81	95	16	75	78	38	70	127	23	36
	" 3	144	30	113	164	30	93	138	68	81	217	36	34
	" 4	131	24	94	150	22	77	118	50	81	171	40	38
	Totals	442	90	382	503	82	329	412	197	305	659	120	135
Ward 4	Prec. 1	62	12	62	74	6	56	53	27	56	103	16	17
	" 2	151	40	119	194	19	97	165	58	87	223	45	42
	" 3	127	26	108	160	12	89	121	53	87	187	42	32
	" 4	183	57	123	221	34	108	181	88	94	242	77	44
	Totals	523	135	412	649	71	350	520	226	324	755	180	135
Ward 5	Prec. 1	155	41	161	192	31	134	153	78	126	237	66	54
	" 2	200	45	137	235	30	117	185	93	104	244	84	54
	" 3	323	58	207	360	50	178	271	164	153	296	199	93
	" 4	257	53	120	289	41	100	225	115	90	215	175	40
	Totals	935	197	625	1076	152	529	834	450	473	992	524	241

Ward 6	Prec. 1	123	21	101	138	21	86	126	35	84	168	36	41
	" 2	194	37	108	214	28	97	163	82	94	207	85	47
	" 3	196	47	148	236	40	115	186	86	119	252	75	64
	" 4	285	61	182	343	37	148	254	136	138	288	162	78
	Totals	798	166	539	931	126	446	729	339	435	915	358	230
Ward 7	Prec. 1	203	49	132	259	34	91	214	86	84	246	98	40
	" 2	204	26	165	234	22	139	198	71	126	279	55	61
	" 3	291	49	117	321	46	90	245	114	98	252	157	48
	" 4	195	45	133	218	42	113	183	85	105	232	88	53
	Totals	893	169	547	1032	144	433	840	356	413	1009	398	202
Ward 8	Prec. 1	273	44	167	307	29	148	206	138	140	258	145	81
	" 2	283	41	115	314	32	93	243	106	90	250	155	34
	" 3	134	59	175	175	37	156	161	66	141	252	38	78
	Totals	690	144	457	796	98	397	610	310	371	760	338	193
Ward 9	Prec. 1	348	61	131	380	46	114	305	125	110	288	206	46
	" 2	311	67	118	324	44	128	263	117	116	295	155	46
	" 3	326	76	126	368	56	104	260	162	106	305	170	53
	" 4	130	32	105	156	18	93	120	67	80	168	57	42
	Totals	1115	236	480	1228	164	439	948	471	412	1056	588	187
Ward 10	Prec. 1	305	59	110	332	41	101	248	133	93	224	196	54
	" 2	300	54	104	322	36	100	248	113	97	227	174	57
	" 3	186	50	149	237	34	114	192	77	116	280	51	54
	Totals	791	163	363	891	111	315	688	323	306	731	421	165
Ward 11	Prec. 1	274	87	189	348	52	150	246	159	145	316	158	76
	" 2	286	79	217	367	46	169	262	168	152	378	127	77
	" 3	223	60	167	258	59	133	187	120	143	301	70	79
	Totals	783	226	573	973	157	452	695	447	440	995	355	232
Grand Totals		7440	1625	4796	8618	1173	4070	6684	3332	3845	8624	3398	1839

MUNICIPAL ELECTION, DECEMBER 2, 1919

			MAYOR			ASSESSORS				SCHOOL COMMITTEE					
		Whole Number of Ballots Cast	Bill	Quinn	Blank	Carew	Fallon	Harrington	Blank	Cassedy	Delaney	Driscoll	Reed	Skeeley	Blank
Ward 1	Prec. 1	207	7	199	1	12	151	39	5	44	34	114	11	189	64
	" 2	307	14	292	1	24	214	62	7	56	38	150	31	276	81
	Totals	514	21	491	2	36	365	101	12	100	72	264	42	465	145
Ward 2	Prec. 1	362	24	307	31	27	178	109	48	68	42	210	47	286	131
	" 2	271	22	224	25	21	104	104	42	45	33	157	22	224	107
	Totals	633	46	531	56	48	282	213	90	113	75	367	69	510	238
Ward 3	Prec. 1	209	17	190	2	19	91	85	14	71	32	136	21	116	76
	" 2	221	14	207	0	12	66	122	21	42	18	142	12	149	91
	" 3	307	40	262	5	33	142	98	34	98	56	164	29	138	151
	" 4	267	41	225	1	28	82	135	22	74	48	136	31	142	125
	Totals	1004	112	884	8	92	381	440	91	285	154	578	93	545	443
Ward 4	Prec. 1	131	23	105	3	18	64	37	12	55	51	75	23	24	40
	" 2	302	66	233	3	52	127	100	23	118	71	180	57	80	106
	" 3	248	74	171	3	67	116	53	12	134	59	139	71	43	86
	" 4	331	136	193	2	103	115	99	14	165	66	191	123	55	108
	Totals	1012	299	702	11	240	422	289	61	472	247	585	274	202	340
Ward 5	Prec. 1	349	69	276	4	36	132	169	12	129	67	238	62	161	85
	" 2	351	99	250	2	56	137	149	9	186	78	244	108	95	107
	" 3	539	252	280	7	159	191	177	12	320	93	262	255	138	150
	" 4	385	254	130	1	162	130	80	13	215	77	165	271	60	116
	Totals	1624	674	936	14	413	590	575	46	850	315	909	696	454	458

Ward 6	Prec. 1	225	91	134	0	59	109	44	13	100	60	121	70	28	77
	" 2	271	135	135	1	107	94	61	9	125	60	133	123	41	86
	" 3	350	132	216	2	80	204	45	21	155	79	231	132	47	166
	" 4	447	241	205	1	145	235	61	6	241	106	254	261	48	136
	Totals	1293	599	690	4	391	642	211	49	621	305	739	586	164	465
Ward 7	Prec. 1	359	141	214	4	99	166	70	24	163	94	215	142	72	110
	" 2	366	130	233	3	116	165	61	24	134	93	224	119	57	137
	" 3	369	236	130	3	173	142	40	14	191	85	176	240	41	105
	" 4	333	129	203	1	85	154	66	28	138	72	211	118	49	140
	Totals	1427	636	780	11	473	627	237	90	626	344	826	619	219	492
Ward 8	Prec. 1	446	217	227	2	144	161	117	24	297	113	204	275	75	142
	" 2	382	224	156	2	162	163	48	9	262	81	190	269	48	116
	" 3	383	51	329	3	37	232	88	26	125	114	306	49	81	145
	Totals	1211	492	712	7	343	556	253	59	684	308	700	593	204	403
Ward 9	Prec. 1	464	336	126	2	218	174	38	34	306	126	186	339	49	160
	" 2	466	247	218	1	133	226	83	24	334	152	201	308	72	131
	" 3	480	214	265	1	137	236	92	15	270	133	256	223	93	139
	" 4	267	65	201	1	57	150	46	14	103	110	167	80	44	92
	Totals	1677	862	810	5	545	786	259	87	1013	521	810	950	258	522
Ward 10	Prec. 1	387	269	117	1	181	150	44	12	285	102	144	326	56	93
	" 2	417	304	113	0	187	145	69	16	291	145	121	343	37	93
	" 3	385	97	286	2	66	187	114	18	133	165	263	121	117	95
	Totals	1189	670	516	3	434	482	227	46	709	412	528	790	210	281
Ward 11	Prec. 1	455	202	253	0	121	232	84	18	220	190	206	220	84	144
	" 2	500	103	395	2	74	265	143	18	157	195	300	107	212	159
	" 3	421	62	354	5	45	219	118	39	95	210	255	69	150	179
	Totals	1376	367	1002	7	240	716	345	75	472	595	761	396	446	482
Grand Totals		12,960	4778	8054	128	3255	5849	3150	706	5945	3348	7067	5108	3677	4269

MUNICIPAL ELECTION, DECEMBER 2, 1919—(Continued)

		COUNCILLORS															LICENSE			Women Vote
		Ahearn	Anderson	Angus	Barrett	Black	Brown	Foley	Good	Leahy	Mahoney	McCarthy	McMinimen	Pill	Wright	Blank	Yes	No	Blank	Women Voters
Ward 1	Prec. 1	154	43	10	168	56	7	8	87	8	30	113	71	10	4	59	130	25	52	21
	" 2	252	106	20	225	160	13	17	73	16	51	157	78	22	8	30	238	57	12	9
	Totals	406	149	30	393	216	20	25	160	24	81	270	149	32	12	89	368	82	64	30
Ward 2	Prec. 1	181	26	25	277	100	12	16	144	23	81	116	117	16	9	305	181	71	110	30
	" 2	135	20	20	181	69	16	20	76	20	47	61	108	13	11	287	154	43	74	23
	Totals	316	46	45	458	169	28	36	220	43	128	177	225	29	20	592	335	114	184	53
Ward 3	Prec. 1	78	17	15	150	124	11	14	86	15	81	60	38	30	7	110	140	35	34	17
	" 2	54	14	7	168	140	2	7	61	10	132	112	48	34	7	88	128	28	65	6
	" 3	111	31	30	171	164	22	35	104	25	109	79	52	50	23	222	172	59	76	11
	" 4	62	23	40	154	131	16	21	97	25	152	73	40	55	15	164	160	55	52	11
	Totals	305	85	92	643	559	51	77	348	75	474	324	178	169	52	584	600	177	227	45
Ward 4	Prec. 1	47	15	16	66	51	8	99	52	10	57	46	23	12	15	87	80	22	29	3
	" 2	80	49	70	130	108	53	39	109	39	129	85	40	75	36	106	157	89	56	4
	" 3	64	67	78	116	70	55	32	99	20	82	75	47	38	56	93	144	67	37	18
	" 4	84	116	118	137	83	100	55	102	36	84	85	41	79	84	120	154	138	39	23
	Totals	275	247	282	449	312	216	145	362	105	352	291	151	204	191	466	535	316	161	48
Ward 5	Prec. 1	131	74	64	208	148	36	46	136	38	104	108	72	76	29	126	216	94	39	22
	" 2	112	72	81	168	121	66	53	160	31	79	110	54	90	60	147	161	144	46	58
	" 3	176	205	167	218	131	186	74	192	34	63	128	58	124	151	249	185	286	68	70
	" 4	94	216	154	99	65	192	55	95	24	29	67	40	84	159	167	109	227	49	67
	Totals	513	567	466	693	465	480	228	583	127	275	413	224	374	399	689	671	751	202	217

Ward 6	Prec. 1	64	73	67	95	57	54	36	84	20	59	55	26	35	59	116	113	71	41	3
	" 2	75	118	102	98	54	98	37	98	17	34	83	21	47	98	104	136	101	34	13
	" 3	90	111	92	148	74	94	64	152	33	69	111	28	59	86	189	188	114	48	55
	" 4	88	208	203	144	105	189	55	139	26	45	120	39	64	185	178	163	223	61	76
	Totals	317	510	464	485	290	435	192	473	96	207	369	114	205	428	587	600	509	184	147
Ward 7	Prec. 1	80	123	108	147	75	112	54	140	34	50	140	23	66	117	167	167	140	52	39
	" 2	92	101	97	136	88	84	38	164	36	56	176	21	64	130	181	207	75	84	16
	" 3	64	206	188	99	65	168	37	114	32	27	74	27	75	176	124	144	185	40	50
	" 4	62	111	86	104	73	87	63	142	49	38	128	30	70	106	183	167	114	52	31
	Totals	298	541	479	486	301	451	192	560	151	171	518	101	275	529	655	685	514	228	136
Ward 8	Prec. 1	116	226	152	150	76	135	39	230	37	37	133	42	57	123	231	171	215	60	107
	" 2	107	210	137	128	78	159	33	125	24	23	94	36	59	138	177	134	213	35	101
	" 3	97	65	48	179	99	36	35	238	47	39	301	27	33	42	246	249	55	79	27
	Totals	320	501	337	457	253	330	107	593	108	99	528	105	149	303	654	554	483	174	235
Ward 9	Prec. 1	78	250	177	141	109	206	36	161	23	25	95	17	59	194	285	141	275	48	119
	" 2	91	148	142	164	105	140	40	234	33	49	142	26	37	126	351	207	203	56	133
	" 3	110	197	163	188	108	141	75	216	49	46	152	40	78	135	222	194	216	70	77
	" 4	79	67	85	119	46	56	36	155	64	49	115	15	30	48	104	141	80	46	31
	Totals	358	698	567	612	368	543	187	766	169	169	504	98	204	503	962	683	774	220	360
Ward 10	Prec. 1	70	223	187	98	57	186	30	162	38	21	50	31	33	178	184	115	244	28	116
	" 2	70	255	197	102	64	200	21	140	49	22	57	23	49	207	212	109	269	39	98
	" 3	86	124	84	193	106	53	40	201	112	62	165	21	38	54	201	236	79	70	62
	Totals	226	602	468	393	227	439	91	503	199	105	272	75	120	439	597	460	592	137	276
Ward 11	Prec. 1	106	173	155	192	81	137	63	160	179	34	126	40	52	132	190	202	203	50	77
	" 2	109	98	71	242	99	65	77	219	307	52	182	28	71	60	320	208	146	74	65
	" 3	94	50	49	136	67	29	53	191	331	41	134	19	23	27	440	255	81	85	58
	Totals	309	321	275	570	247	231	193	570	817	127	442	87	146	219	590	737	430	209	200
Grand Totals		3643	4267	3505	5639	3407	3224	1473	5138	1914	2188	4108	1507	1907	3095	6825	6228	4742	1990	1747

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